

CONSUMERS UNION *Reports*

Volume 5, Number 1

JANUARY 1940
IN TWO PARTS: PART I

\$3 a Year, 25c a Copy



Technical

BREAKFAST CEREALS
RADIOS & COMBINATIONS
SHIRTS—NEW RATINGS
QUICK-FROZEN FOODS

General

THE DIES-MATTHEWS ATTACK
WAR AND PRICES: 5TH REPORT
FTC & GOOD HOUSEKEEPING
MEN'S SHIRT LABOR

Medical

THE AMERICAN DIET
GLANDULAR PRODUCT
GELATIN & FATIGUE
NUTRITION AND TEETH

CONSUMERS UNION OF UNITED STATES, INC.



Reports In This Issue

CU's ratings are based on both quality and price. "Best Buys" should give greater return per dollar although some products rated "Also Acceptable" may be of higher quality. Except where noted, a product rated "Not Acceptable" is judged to be not worth buying at any price, because of inferior quality or potential harmfulness.

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The Consumer Reporter

Ask Your Druggist, He Knows

There is treason in the ranks of the drug trade, and proprietary drug manufacturers and their press are up in arms. It all started, innocently enough, with a factual survey made by bright young marketing students at Mississippi State College. These neophytes in the ways of commerce learned that out of 568 drug salespersons surveyed "only 187, or 33%, believe that nationally advertised brands [all 'protected' by price-fixing] are worth their higher prices" compared with "lesser known brands (private, regional or non-advertised). Products compared were always of identical quantity." "Mutiny on our 'Bounty'" is the apt title Hearst's *American Druggist* gives to an hysterical editorial warning druggists and their clerks that such honesty is "subversive" and just won't do.

Where the Money Goes

In *The Annals of the American Academy of Political and Social Science*, Professor Leland J. Gordon (conservatively) estimates that your share of the cost of advertising on a per capita basis, in 1937, amounted to \$11.54 (or, \$57.70 for a family of five). On the other hand, he observes, your share of pure food and drug law enforcement cost but 1.5¢ (or, 7.5¢ for a family of five) a year. These little figures might come in handy next time you read a business-inspired blast on the high cost of government in your local newspaper.

Oh, Mr. Dies

"If there is to be any comment on the high leadership of the CIO, it is that there are too darned many Catholics there, not too many Communists. . . . My only quarrel with the CIO is that it does not go far enough. The Pope's encyclicals are still far more radical than the CIO . . . but the CIO is a long step in the right direction."—REVEREND CHARLES O. RICE, St. Agnes Roman Catholic Church, Pittsburgh (*N. Y. Times*).

"Stockholder Trouble"

Remington-Rand's James H. Rand, Jr., is one American businessman who really knows the meaning of the phrase "labor trouble" (see December '39 *Reports*). Now he's learning to understand a new one, "stockholder trouble." The "Red agitators" this time are not trade unionists seeking a living wage, but coupon-clippers seeking better dividends. As a by-product their activities should serve to warn Mr. Rand and like-minded industrialists that strikebreaking just doesn't pay. The stockholder "troublemakers" recently sued "to compel James H. Rand, Jr., and other high officers of the corporation to pay back more than a million dollars squandered in the campaign of terrorism against the strikers," according to *Labor*. Maybe the stockholders ought to form a picket line?

Home on the Wane

" . . . While no calculation can give a precise figure for the depression loss in income . . . the figures do suggest that this loss through nonproduction [that is, the depression loss in income through idleness of men and machines during the last eight years] was in the magnitude of 200 billion dollars worth of goods and services. . . . The significance of this figure is hard to grasp, but some idea can be obtained by considering what 200 billion dollars would mean in terms of concrete goods. If all the idle men and machines could have been employed in making houses, the extra income would have been enough to provide a new \$6,000 house for every family in the country." (From the report of the National Resources Committee, appointed by President Roosevelt.)

THE following cases are selected from scores of actions taken monthly by the Federal Trade Commission and the Food & Drug Administration.

Unless otherwise stated, actions taken by the Food & Drug Administration refer to individual shipments only.

The Dep't of Justice won an easy victory in its first criminal case involving violation of the Wheeler-Lea Act. John Petrie, trading as **Purity Products Co.** of Chicago, was charged with dissemination of false advertising of its product, a feminine hygiene preparation, which was alleged to be dangerous to health. The defendant changed his plea from "not guilty" to "guilty" before Federal Judge Woodward in Chicago, and was fined \$1,000.

Under the Wheeler-Lea Act it is a criminal offense to disseminate false advertisements for a commodity "if the use of the commodity advertised may be injurious to health because of results from such use under the conditions prescribed in the advertisement thereof, or under such conditions as are customary or usual." This section of the Act provides a maximum sentence of \$5,000 fine, six months in prison, or both, for first offenders, with double punishment for repeaters.

A civil suit asking for \$30,000 damages on behalf of the government also is pending against the same defendant alleging that he violated the terms of a previous cease and desist order.

The Federal Trade Commission has taken action against:

E. A. Morgan & Co. and **E. A. Morgan**, its president and owner, packagers and distributors of a powdered preparation designated as *Run-Safe*, *Run-Free*, and *Runless*. The respondents are ordered to cease and desist from representing, through use of the terms "Run-Safe," "Run-Free" and "Runless" or other similar terms, or in any other manner, that the product will prevent runs, snags or breaks, will hold the color of hosiery or lingerie, will save approximately 50% of costs, or will render hosiery or lingerie rain-spot proof.

Eversharp Fountain Pens (The Wahl Co.). The respondent has been ordered to cease and desist from representing, through use of the term, "Leak-Proof," that *Eversharp* fountain pens will not leak, until they are so designed and constructed that they will not leak. The company is also ordered to cease misrepresenting the ink capacity of its fountain pens. The FTC finds that ink, under certain conditions, can and does leak from *Eversharp* pens equipped with the so-called "Safety Ink Shut-Off" device, and that the pens do not hold more than

The Docket

Notes on government actions against misleading advertising, false claims, dangerous products

twice as much ink as competitive fountain pens, and, in fact, hold substantially less than the amount claimed.

Bost Toothpaste (**Bost** Tooth Paste Corp.). The respondent stipulates that it will cease representing that *Bost* toothpaste removes tobacco stains which have been absorbed into the enamel of the teeth. The stipulation points out that the respondent's preparation will not be effective in removing such stains.

The Food & Drug Administration has seized:

Butter. Nine hundred tubs of butter, shipped by **Deer Creek Creamery Co.**, were seized because of adulteration. Samples taken from this product were found to contain less than 80% of milk fat. Others contained added mineral oil. Some samples were adulterated in both ways.

According to the annual report of the Food & Drug Administration for the 1939 fiscal year, there were 128 butter seizures during that period, covering the products of 86 manufacturers, and criminal prosecutions were initiated against 34 defendants. This compares with 111 seizures in 1938, covering 76 manufacturers, and 30 criminal prosecutions.

Medicinal Preparations. Court action against **David M. Leff**, trading as **Merit Laboratories Co.**, Philadelphia, was terminated with a fine of \$25. Defendant had shipped the following products: *Pinip*, a cold and cough remedy which was substandard because it contained less vitamin "D" than was declared on the label; *Pinip Laxative Cold Capsules*, the label of which failed to declare acetophenetidin, an acetanilid derivative, and failed to note the presence of excessive acetanilid above the declared amount; *Pinip Laxative Cold Capsules—Special Strength*, the label of which failed to declare acetophenetidin, and bore false and fraudulent therapeutic claims.

Another court action involved **C. H. Griest Co., Inc.**, and **Earl I. Runner**, Wheeling, W. Va. The defendants' product, *Runner's Sore Throat Remedy*, bore false and fraudulent therapeutic claims. The fine, unusually high for such actions, totaled \$800 (\$400 against the company and \$400 against **Earl I. Runner**).

CONSUMERS UNION

... is a non-profit organization formed to provide consumers with information and counsel on consumer goods and services. It is chartered under the Membership Corporation laws of New York State and derives its income from the fees and small contributions of its members. Consumers Union is sponsored by more than 70 educators, social workers, authors and scientists (names on request). It has no connection of any kind with any commercial interest. Consumers Union's own staff technicians conduct many of the tests and investigations on which ratings are based. The greater part of the testing is done by consultants—more than 200 specialists selected for their competence and freedom from commercial bias—in university, governmental and private laboratories. Samples for test are in almost all cases bought on the open market.

PUBLICATIONS

Consumers Union Reports is published monthly in Full and Abridged form. The Full Reports contains ratings and discussions of higher-priced commodities, as well as much general material, not covered in the Abridged. All members receive along with the Reports an *Annual Buying Guide* (Full or Abridged)—a compact booklet designed for quick reference in shopping.

Members of Western Consumers Union, West Coast branch of the national organization, receive each month as part of the Reports a special section covering West Coast products and consumer activities.

MEMBERSHIP FEES

... are \$3, including subscription to the Full Reports and *Buying Guide*; \$1, including subscription to the Abridged Reports and *Buying Guide*; and \$3.50, including subscription to the Full West Coast edition. Foreign and Canadian memberships are 50c higher to cover postage and exchange. Reduced rates are available for groups (students, trade union members, cooperatives, consumer clubs, etc.). Library rates are \$2.50 per year (without *Buying Guide*).

Notice of change of address should be given at least two weeks in advance (please indicate whether you receive the Full or the Abridged Reports and give old address).

CORRESPONDENCE

... should be addressed to Consumers Union, 17 Union Square West, New York City (members of Western Consumers Union may write to the West Coast offices, 251 Kearny Street, San Francisco). CU regrets that time does not permit answering of inquiries for special technical or medical information or requests for advance data on test results.

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January, 1940

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Name

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Quotes Without Comment . . .

"THE sales managers [in a round-table discussion by the Milwaukee Sales Managers Ass'n] argued the question, 'The Consumer Movement—A Pain in the Neck or a Sales Opportunity?' without reaching a decision"—ADVERTISING AGE.

"I don't know how many of you are aware of the consumer movement so-called. There are 27 publications and organizations, such as Consumers' Research, Consumers Union, feeding old John Henry Public a lot of unsubstantiated and unsubstantiable so-called facts. It's grand reading, good fiction, and unfortunately it is growing and undermining our industry. Courses are given in schools and universities along the same line. It's a constant gunfire on our business, on our jobs. I don't think we can fight it single-handed, but I do think that we can do our share."—From an address by Mr. William M. Bristol, Jr., of the Bristol-Myers Co., and president of Packaging Institute, Inc., in opening the annual meeting of the Institute in Chicago.

"No association can meet the consumer problem fairly so long as any number of its important members are afraid of the consumer movement because it might put them out of business.

"As a result, most of the associations that could be most powerful in cleaning up the abuses that have nourished the consumer movement are handicapped by the fact that some of their leading members are, in their business relations, practically devoid of any traces of conscience."—From an article by C. B. Larrabee, in PRINTERS' INK.

"It is to be borne in mind that drugs and medicines, and cosmetics to an almost equal degree are essential commodities. They play a dominant part in the health and happiness of the people. . . . Take toothpastes as an illustration. The more the public can be made to look upon them as aids to health, the greater will be the public benefits, and the greater the prestige of products of this class."—DRUG TRADE NEWS.

"The speaker [Mr. Donald E. Montgomery, Consumers' Counsel of the Agricultural Adjustment Administration] described advertising men as being in

a self-conscious and bashful state of mind now that they are confronted with criticism for the first time in 40 years. Therefore, he said, they fall back on the defense that those who criticize them are attacking advertising, which, Mr. Montgomery acknowledged, is a vital part of the economic machine. He derided the conclusion that critics of advertising are attacking America and are therefore Communists.

"The consumer movement does not intend to assume the burden of attacking advertising," he explained. "It is concerned chiefly with the way advertising works. Advertisers can benefit a great deal from this interest. Any institution that cannot stand criticism is on its way out. . . ."—ADVERTISING AGE.

"Instead of fearing the objectives of consumer groups, Mr. Montgomery declared, business should adhere to them in its own self-interest. He also asserted that the past attempts of business groups to set up 'supposed consumer organizations' which business can dominate will no longer make headway because 'consumer groups are on to that and will not fall for it any longer.'"—KANSAS UNION FARMER.

"From the days when the Supreme Court thought the income tax was socialistic, down to Mr. Dies, attempts to improve the functioning of democracy have been branded as radical, dangerous, and most likely of foreign inspiration.

"And usually a few years later they have been adopted and enshrined as part of the American tradition. After 10 years, a radical proposition usually wins a conservative label. . . . To allow progressive ideas to succumb to a wave of Red-hunting and throw the country back into a period of reaction would be an unnecessary and tragic loss."—Raymond Clapper, in THE PITTSBURGH PRESS.

"There is no interest which is more fundamental than that of consumers. All residents of the nation are consumers in a large or limited way. No matter what our other interests, we have in common one function—that of consumption. Yet this interest is inadequately represented in governmental organization and policy. As an organization we request you to use your authority and influence to establish a Federal agency which may present the consumer point of view in government councils and may distribute to consumers needed information."—From a letter to President Roosevelt by Kathryn McHale, General Director of the American Ass'n of University Women.

CONSUMERS UNION Reports

TECHNICAL SECTION

OF CONSUMERS UNION REPORTS



White Broadcloth Shirts

Of the 28 brands tested for this report, six are "Best Buys," two are "Not Acceptable"

AROUND 75% of the shirts men wear, exclusive of work shirts, are made of broadcloth, and of these a goodly number are white. A psycho-technologist, or a techno-psychologist, might be needed to give the full explanation of white broadcloth's popularity. But assuredly a major reason for it is that broadcloth combines lightness with durability to a more satisfactory degree than any of the other popular shirt fabrics, including poplin, oxford cloth, madras, chambray and percale.

As for the color preference, maybe it's just that white *looks* dressier than solid-colored or patterned shirts. Maybe it's because the tradition of the "white collar" has a deep root in America (the phrase has been dignified by inclusion in Webster's International Dictionary).

For whatever reasons, white broadcloth leads in popularity and this report is limited to shirts of that color and fabric. For findings of a general nature, which still hold good, and for advice on fabrics, types of collars, workmanship, dimensions, methods of test, and laundering, members are referred to earlier reports (October 1936, September 1938) and to the 1939 *Buying Guide*.

This report, based on new tests, rates a larger number of brands than heretofore, representing many more samples.

For an account of labor conditions in the shirt industry see page 27.

Besides the weight of broadcloth, which does not vary greatly, there are two characteristics which tend to influence its quality.

One of the two factors is the number of threads used in weaving. All broadcloth is woven with approximately twice as many threads running lengthwise (warp yarns) as crosswise (filling yarns). Within this general pattern, however, there may be considerable variation in the thread count per inch, such as that between *Sears' Nobility* (178x81) and *Manhattan* (135x65).

The textural difference between the two is apparent not only to the eye but also by feeling the fabric between the fingers. High thread counts make for smoother, more flexible and generally more luxurious "feel." The most common constructions in men's broadcloth shirts are 128x68, 135x60 and 144x76.

The second factor bearing on the quality of the shirt is the ply of the yarn, that is, the number of twists or strands used in its manufacture. Most common is 1x1, which means that 1-ply cotton yarn was used in both warp and filling, but 2x1 and 2x2 are also to be found. Although 2x2 is most desirable from the point of view of appearance, since it imparts a soft, silk-like sheen—particularly in higher-count fabrics—it does not warrant a considerably higher price; 1x1 is considered quite satisfactory for general wear.

POSSIBLE shrinkage remains one of the factors most likely to render a shirt unsatisfactory. At present the Division of Trade Standards of the National Bureau of Standards bases its recommendations to manufacturers equally on preshrunk and unshrunk fabrics. It has, however, recently requested, from the National Ass'n of Shirt and Pajama Manufacturers, data on preshrunk shirts with a residual shrinkage of not more than 2% in each direction.

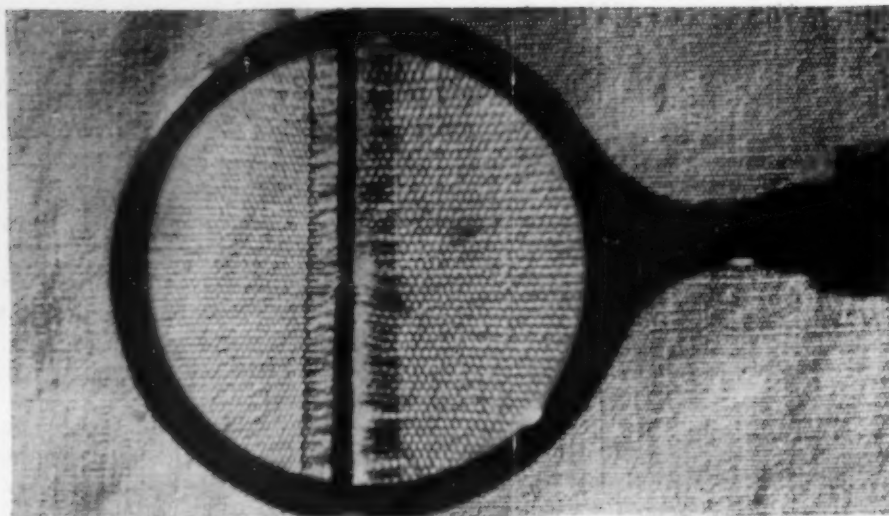
If standards based on such data were drawn up and accepted by the industry, the consumer could reasonably expect a size 15 shirt to remain size 15 after laundering. Manufacturers now have a tendency to make shirts larger than marked size because they expect considerable shrinkage. If these projected standards are accepted, consumers who buy a size 15 shirt need not wear size 16 before laundering and size 14½ or 15 after.

Sanforizing is the best pre-shrinking process known for cotton fabrics, and Sanforized goods usually fit well and retain their fit after repeated launderings. It is important to remember, however, that the Sanforized label is no guarantee of other important factors, including workmanship and durability. Of the Sanforized shirts tested for this report, three were "Best Buys," a number were "Also Acceptable," one was "Not Acceptable."

Of the two general types of collars, stiffened ones do not wear so well as soft ones, and there has been some reaction against them by buyers. Various manufacturers are accordingly trying to overcome this reaction by the use of an especially strong top fabric for the collar (so designated in the ratings). Because of the high variability in breakdown among stiffened collars, no shirts were rated down on this factor alone.

Wings, a highly advertised shirt that appeared on the market recently, receives a "Best Buy" rating. Two brands out of the Middle West, which are sold for the most part in that section, rank high in quality at a reasonable price. Shirts from Ward's and Penney are still "Best Buys."

Generally, few of the shirts, which ranged in price from \$1 to \$2.65, were of very low quality. All had a broadcloth weave of 1x1, with the exception of *Sears' Nobility* Cat. No.—



UNDER A HAND LENS

... buyers can easily see the difference between high- and medium-count fabrics (Sears', left; Manhattan, right)

33D217, which was 2x2. No fabrics below a medium thread count (128x69-144x76) were found. There were few serious defects in sizing and workmanship.

"Best Buy" ratings are based on highest value per dollar.

Best Buys

Towncraft (J. C. Penney stores). \$1.49. Soft or stiffened collar,¹ woven acetate type. High count. Stiffened collar appears satisfactory. Highest quality tested.

Scottville (Carson-Pirie-Scott & Co., Chicago). \$1.65. Soft collar. High count. Second in order of quality and not overpriced.

Conway (Marshall Field & Co., Chicago). \$1.65. Soft, or stiffened collar,¹ woven acetate type. High count. Stiffened collar appears satisfactory. Fourth in order of quality and not overpriced.

Wings (Piedmont Shirt Co., Greenville, S. C.). \$1.65. Stiffened collar,¹ woven acetate type, of "genuine Aeroplane cloth guaranteed to outwear shirt." High count. Sanforized. Collar appears satisfactory. Sixth in order of quality and reasonably priced.

Ward's (Montgomery Ward). \$1.39. Cat. No.—2961, soft collar; Cat. No.—2952, stiffened collar,¹ woven acetate type. High count. San-

forized. Sleeve cut long. Stiffened collar appears to be satisfactory. Eleventh in order of quality, but low price makes it a "Best Buy."

Wanamaker's (John Wanamaker, NYC and Philadelphia). \$1.35. Soft collar. High count. Sanforized. Equal in quality to *Ward's* above. Price makes it a "Best Buy."

Also Acceptable

(In approximate order of quality)

Wilson (Wilson Bros., Chicago). \$1.95. Soft collar. High count. Sanforized. Third in order of quality.

Arrow Dale (Cluett-Peabody Co., NYC). \$2.50. Stiffened collar,¹ woven acetate type. High count. Sanforized. Collar appears satisfactory. Same quality as *Wilson* above. High priced.

AMC (distrib., Associated Merchandising Corp.²). \$2. Soft collar, or stiffened collar, woven acetate type. High count. Sanforized. Stiffened collar shrunk to 1/4" below marked size, but stiffening appears to be satisfactory. Fifth in order of quality.

Ward's Pima³ (Montgomery Ward). \$1.85. Cat. No.—2632, soft collar;

² Bloomingdale's, NYC; Abraham & Straus, Brooklyn; Filene's, Boston; Strawbridge & Clothier, Philadelphia; J. L. Hudson, Detroit; Bullock's, Los Angeles; The Emporium, San Francisco.

³ A domestic cotton of long fibers and high luster.

Cat. No.—2637, stiffened collar, woven acetate type. High count. Sanforized. Sleeve cut long. Stiffened collar appears satisfactory. Generally good quality.

Eagle Sturdeetex (Jacob Miller Son Co., Philadelphia). \$2.50. Soft collar. High count. Resistance to abrasion relatively low. Good quality otherwise, but overpriced.

Sears' Nobility (Sears-Roebuck). \$1.89. Cat. No.—33D211, soft collar; Cat. No.—33D217, stiffened collar, woven acetate type. High count of Pima cotton.² Sanforized. Sleeves cut long. Stiffened collar appears satisfactory. Generally good quality.

Manhattan Austin (Manhattan Shirt Co., NYC). \$2.50. Soft collar. High count. Good quality, but overpriced.

Jayson Whitehall (F. Jacobson & Sons, NYC). \$1.95. Soft collar, or stiffened collar, woven acetate type. High count. Sleeves cut rather long. Stiffened collar appears satisfactory. Generally good quality.

Real Silk (Real Silk Hosiery Mills, Men's Division, Indianapolis). \$2.65. Soft collar. High count. Tensile strength relatively low. Good quality, but overpriced.

Eagle (Jacob Miller Son Co.). \$1.85. Soft collar. High count. Resistance to abrasion relatively low. Only fair quality.

Sears' Tru-Point Cat. No.—33D50. \$1.29. Stiffened collar, woven acetate type. Medium count. Sanforized. Sleeves cut long. Stiffened collar appears satisfactory. Only fair quality.

Arrow Dart (Cluett-Peabody Co.). \$2.25. Stiffened collar, woven acetate type. Medium count. Sanforized. Stiffened collar appears satisfactory. Fair quality; overpriced.

Loomcraft (TruVal Manufacturers Inc., NYC). \$1. Stiffened collar, coated type. Medium count. Buttons only fair quality. Collar shrinks considerably. Plies of collar separated after several launderings, but can be re-fused by using considerable pressure in ironing. Only fair quality.

TruVal (TruVal Manufacturers,

¹ Special collar fabric.

Inc.). \$1.35. Stiffened collar,¹ woven acetate type. High count. Sanforized. Resistance to abrasion relatively low. Collar appears satisfactory. Only fair quality, but reasonably priced.

CD Cat. No.—2841 (Cooperative Distributors, NYC). \$1.25 with soft collar, or Cat. No.—2842 at \$1.39 with stiffened collar, woven acetate type. Medium count. Shrinkage considerable, but allowed for in cutting. Stiffened collar appears satisfactory. Generally fair quality.

Van Heusen (Phillips-Jones Corp., NYC). \$1.95. Special collar of heavy single layer of fabric. High count. Sanforized. Resistance to abrasion relatively low. Sleeves cut long. Fair quality; overpriced.

Wilson Oban (Wilson Bros.). \$1.39. Stiffened collar, coated type. Medium count. Sanforized. Collar shrank to $\frac{3}{8}$ " below marked size. Resistance to abrasion relatively low. Collar appears satisfactory. Fair quality.

Manhattan (Manhattan Shirt Co.). \$2. Either soft or stiffened collar, woven acetate type. Medium count. Resistance to abrasion relatively low. Stiffened collar appears satisfactory. Fair quality; overpriced.

LongWear (New Process Co., Warren, Pa.). \$1.16. Stiffened collar, coated type. Medium count. Sanforized. One of stiffened collars separated in first few launderings. Only fair quality; not overpriced.

Arrow New Trump (Cluett-Peabody Co.). \$2. Soft collar. Medium count. Resistance to abrasion relatively low. Fair quality; overpriced.

Not Acceptable

Wilson Picadilly (Wilson Bros.). \$1.39. Soft collar. Stiffened collar available. Medium count. Sanforized. Tensile strength and resistance to abrasion relatively low. Generally poor quality.

Needles Fruit of the Loom (Eclipse Needles Co.). \$1.65. Stiffened collar,¹ coated type. Medium count. Fit unsatisfactory after washing. Tensile strength and resistance to abrasion low. Plies of collar separated after two launderings. Generally poor quality.

¹ Special collar fabric.

Radios and Combinations

This final report rates higher-priced radios, radio-phonograph combinations, and high-fidelity combinations. If you are satisfied with local reception, want good tone quality, and can afford the price, high-fidelity receivers are your best choice

SINCE both the radio and the phonograph in a combination utilize the same amplifier and speaker, the only exclusively phonographic parts are the turntable (and accessory gadgets) and the tone arm, the two units together constituting what may be called the record player. In most record players the tone arm has a crystal pickup (the part into which the needle is inserted) that provides reasonably good tone quality. Although appreciably better pickups are available, the increased cost involved is rarely justified for home use.

It is in the turntables and their gadgets that a wide degree of choice occurs. To begin with, there are two general types: the manual record player and the automatic record changer. The most efficient of the record changers tested will eliminate, in an accommodation of eight records, all the separate operations per record which are necessary in a completely hand-operated player—provided you can afford to buy the necessary gadgets and provided they don't go wrong, which they sometimes do.

Manual Record Players

MANUAL record players, in which each disk must be placed by hand, are available with certain refinements. In all but the cheapest ones, for example, there will be found an automatic stop, which is supposed to turn off power to the motor when the end of the record is reached. The simplest is merely a hopeful little device that trips the switch when the tone arm has moved a certain distance toward the center of the record, presumably after the last chord has been sounded. When set for long records, however, this device may decline to operate on shorter records, or, if set for the latter, it may cut long records off short.

A much more satisfactory automatic stop is built on the premise that in most modern records the inner grooves impart a small reverse motion to the tone arm; the stop employs a simple ratchet that permits the disk to turn until the first reverse motion at the end of the record is registered. A stop of this nature is employed in the *Ansley* combinations.

Another satisfactory stop acts with the first excessive movement of the tone arm as the needle enters the inner groove, not waiting for the reverse action. This stop, used in the *Garrard* single-record players, acts somewhat more rapidly than the others. For reliable action, however, it must be carefully adjusted from time to time, since it is subject to wear.

The purchaser of a manual record player equipped with an automatic stop should require a demonstration that it will perform satisfactorily on a variety of 10- and 12-inch disks.

A further refinement affects the starting of the motor. It may be set in motion by a conventional switch or by a special switch actuated by swinging the tone arm horizontally away from the center of the record. This latter device is a genuine convenience, since the ordinary switch is often inaccessible, half-hidden by a record in the dark confines of the phonograph compartment.

Automatic Record Changers

AUTOMATIC record changers are of two basic types: those which will play either 10- or 12-inch records unmixed and those which will play both sizes mixed in any combination. The former design requires that all records stacked for playing be of the same diameter, while the latter design permits a mixing of sizes up to the maximum number which the

record changer is capable of handling.

In automatic record changers of the type tested by CU, the records are placed on a spindle, which is merely an extension of the spindle to be found in any conventional single-record turntable. When the switch is turned on, the first record is dropped to the turntable. The tone arm—which is almost, so the advertisements say, human—then lifts itself from its rest, moves over to the record and *should* set itself down gently on an outside groove.

At the conclusion of the record, the tone arm returns to its rest, the next record drops and the cycle is repeated until the last record is played. Thereupon the tone arm may return to its rest and the motor automatically switch off (as with the *Garrard* type), or the last record may repeat until the phonograph is stopped manually (as with the *RCA* type).

Since the record-changing mechanism is set in motion by the tone arm (presumably not until the end of a record), the reliability of the change-over will depend upon the groove response device, exactly as with the automatic stop on a manual record player. And, similarly, there are varying degrees of efficiency. In unsatisfactory types, the record changer may be set in operation before the completion of a disk or it may refuse to function at all.

For instance, it was impossible to adjust an *RCA* record changer so that it would perform satisfactorily on all the disks that the average collector might want to play. The *RCA* changer was also difficult to adjust so that it entered the groove of the record before the first note or, occasionally, so that it entered the groove at all. *Garrard* was found to be more satisfactory in this respect.

There are two other factors which tend to influence the dependability of the device—both of them in a sense outside the record changer's control. One is the way the disk itself is grooved. Cooperation among record manufacturers toward standardization of entering and terminal grooves would aid materially. It was found, however, that with the more efficient designs, such as *Garrard's*, a high degree of reliability can be expected on a large variety of records so long as they have the oscillating grooves toward the center.

Another factor to be considered for utmost reliability is the tilt, or lack of it, of the machine. When the records are wholly suitable for automatic operation, the instrument should be level—a fact that is best determined with a carpenter's level.

Tone Quality

THE following list, in order of merit, is based solely on tone quality. With combinations, separate listing is given for radio and phonograph reproduction. A low listing does not necessarily reflect on the electrical design of a radio, since tone, to a considerable extent, depends upon size. The *Ansley D-10*—a small table model—is rated toward the end of the listings, although in a console model it would probably rate ahead of most of the large sets. The difference in tonal quality between adjacent models is often very slight—a matter of laboratory measurement. (For duplication of chassis see table on opposite page.)

Radios

Philharmonic Linear Standard.
Philharmonic Futura.
WQXR.
Lafayette BB-11.
Ward's Airline —1201.
Ward's Airline —1000.
Sears' Silvertone —6336.
Philco 195XX.
Farnsworth AC-56.
RCA K-80.
Philco 205RX.
Ward's Airline —801.
Sears' Silvertone —6337.
Sears' Silvertone —6346A.
Stewart-Warner 01-817.
GE H-77.
Sears' Silvertone —6335.
RCA K-60.
Philco 165-K.
Ward's Airline —714.
RCA T-80.
Lafayette BB-2.
Philco 150-T.
Ansley D-10.
Zenith 6-P-448.

Radio-Phonographs

Philharmonic Linear Standard.
Philharmonic Futura.
WQXR.
Lafayette BB-13.
Lafayette BB-7.
Ward's Airline —805.
Sears' Silvertone —6346A.
Ansley D-10.
Zenith 6-R-485.

With many records, however, some of which are doubtless to be found in the average collection, greater reliability of operation may be obtained by tilting the radio slightly so that the tone arm tends to swing toward the center of the turntable. Raising one side of the cabinet an eighth- or a quarter-inch will usually be sufficient, creating a slight tilt not discernible to the eye. If the tone arm refuses to enter the grooves of some records automatically while working satisfactorily with others, chances are that the radio is tilted in the wrong direction.

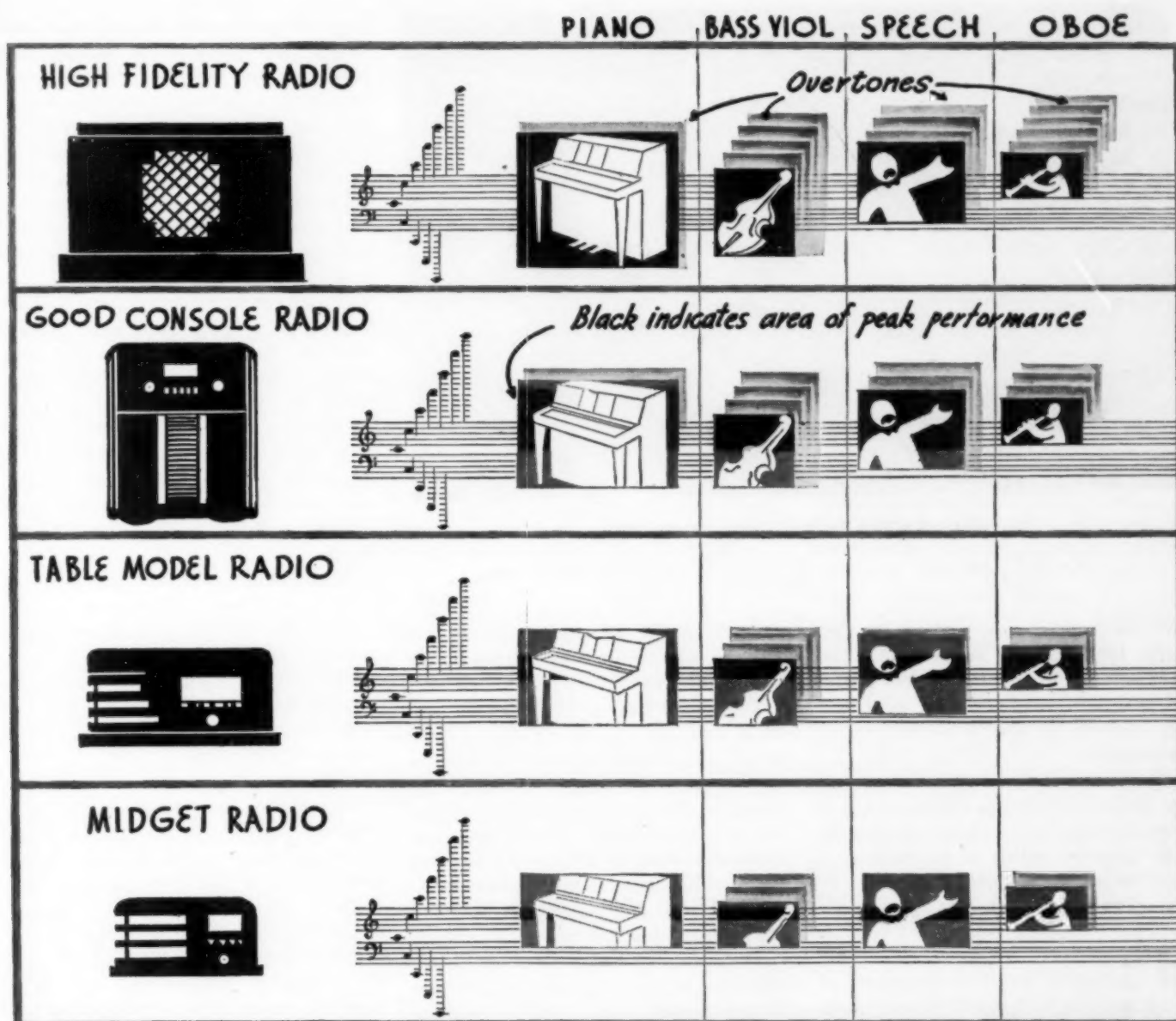
Two Record Changers

GARRARD: Two types of *Garrard* record changers were tested—one playing eight 10- or 12-inch records and one accommodating eight mixed records. CU is inclined to believe that the former is more reliable, although, after expert adjustment, the mixed changer played flawlessly through 50 cycles of operation, including records that had previously stumped it and records that the *RCA* changer had been unable to accommodate satisfactorily.

Loading is somewhat more difficult with the *Garrard* changers—particularly the mixed model—than with the *RCA*. On the other hand, needles are easily inserted, the controls conveniently arranged, records much more readily removed with safety, and the workmanship in general is superior.

RCA: With the exception of ease of loading, the *RCA* automatic record changer is less satisfactory than the *Garrard*. Seven operations may be required to set the mechanism and start the first record. The starting switch is difficult to reach when the spindle is loaded, and there is no automatic stop when it is played manually. The drop of the first record— $2\frac{7}{8}$ inches—is considered excessive, and although no records were broken during tests, the change-over is very noisy. Needles are difficult to insert, and it is easy to damage records when removing them from the spindle. The record changer plays seven 12-inch or eight 10-inch records.

The *Garrard*, which is manufactured in England, costs approximately \$12 more than the *RCA* for the unmixed record design, and \$25 more for the mixed type.



DRAWN FOR CU BY IRVING GRIB

This chart illustrates the tone fidelity of the different types of radios to the actual tone of the instruments they are attempting to reproduce. The background of each instrument indicates the range of sound that the various types of radios can receive. The black area indicates the range that the radio responds to without distortion, the solid gray area, the range of the radio with distortion. For example, a high-fidelity radio receives the complete range of the piano without distortion, whereas the midget radio receives only about half that range and most of it with distortion. The shaded areas directly behind each instrument indicate the overtones to which the radios respond. Overtones are harmonics of a fundamental note which give it its distinctive quality. For example, harmonics of middle-C on the piano would be all other ascending C's as far as the human ear can catch them. The clear reproduction of overtones not only adds greatly to listening enjoyment but also is necessary for complete tone quality of either an instrument or a voice

Shock Hazard

AS CU has pointed out, many radios present a shock hazard. While electrical shocks that might be experienced would rarely be dangerous, they can be decidedly unpleasant and cause considerable nervous reaction. Shock hazard is somewhat increased in phonograph combinations, as the spindle, edge of the turntable, tone arm, and metallic controls constitute

exposed parts that are often "alive." Conscious effort should be made to avoid touching with the free hand any possibly grounded objects, such as electric light fixtures, pull chains, radiators and the like, while manipulating the phonograph.

Image-Frequency Interference

OCCASIONALLY a whistle appears when a desired station is tuned

in, changing in pitch as the radio is tuned in or out. Technically, this whistle is known as "image-frequency interference." It is characteristic of cheap radios and can be eliminated by the manufacturer; however, the presence of whistles, unless excessive, does not necessarily make a radio unacceptable. It should serve as an indication to the buyer—particularly of radios selling for \$40 or more—that the



THE GARRARD RECORD CHANGER

Worked flawlessly . . . through 50 cycles of operation

manufacturer is not putting the best value for price into his product. Often it is possible to tune the desired station so that the whistle cannot be heard, or, at least, so that it is not too objectionable.

A whistle that is constant in pitch as the station is tuned is a direct form of interference that does not necessarily reflect on the quality of the radio.

High-Fidelity Radio-Phonographs

HIGH-FIDELITY receivers are built primarily for the reception of local stations with excellent tone quality. The design of these receivers is such that they tune very broadly—that is, they lack selectivity. Also, a relatively low order of sensitivity is more or less characteristic of these radios.

They are therefore not suited for localities where high sensitivity is necessary to bring in a distant station or selectivity to separate it from a neighboring station. However, CU found that these receivers yield excellent results up to 100 miles from any broadcast center such as New York City.

High-fidelity receivers tested by CU were the *Philharmonic Linear Standard*, the *Philharmonic Futura* and the *WQXR*. These sets are capable of radio and phonograph reproduction of a quality superior to that of other radios and combinations rated, a quality which is limited largely by the

quality of the broadcast and of the records rather than by the radio or the phonograph.

Individual bass and treble tone controls make it possible to improve the sound from inferior stations and to adjust the bass and treble until the sound is the most natural or pleasing for a given volume. Since the sensitivity of the ear to high and low notes varies with the volume, different degrees of bass and treble compensation are required for best reception. Similarly, the individual tone controls are effective in compensating record deficiencies and in maintaining realism at different degrees of loudness in recorded music.

The term "high fidelity" has been loosely applied to almost any type of radio larger than a midget. But the application here is to radios which have been designed to receive the wider frequency response necessary for good tone quality without distortion. This means that the bass, or low-frequency, response will be good without "boom" and that the treble, or high-frequency, response will include overtones or harmonics without fuzz and rasp.

Many so-called "high-fidelity" radios are sold today with claims that they will cover the entire audible range from 16 to 16,000 cycles. However, the word "cover" means nothing in this case. On all but the very poorest radios, you will be able to

hear 60 cycles and 10,000 to 12,000 cycles, but much more faintly than tones in the middle-frequency range and with a fluttering type of distortion on the low-frequency notes and a fuzziness on the high frequencies. A high-fidelity system can reproduce all these frequencies at the same relative volume as the original sound and with no distortion that is noticeable to the ear.

Those receivers tested by CU have tuning, amplifying, and loud speaker systems designed to approach this ideal. Most radios, on the other hand, are designed to avoid too wide a frequency response (often called "too much tone quality") because an expensive job of cutting out distortion must be done if "increased" tone quality is going to be pleasing to the listener.

High-fidelity receivers are designed to tune only over the American broadcast band—sensitivity and selectivity required for distant reception is such as to render high-fidelity reception impossible, even if the signals themselves could be received without static, fading and distortion.

With the elimination of the band-change switch, the controls of the high-fidelity receiver are no more complicated than those on the ordinary radio. In addition to the separate bass tone control, there is a fidelity switch—either separate or incorporated in the treble tone control—which determines the degree of fidelity and cuts in a filter to eliminate whistle between adjacent stations.

High-fidelity receivers are housed in cabinets superior to the average run. However, as the purchaser is paying in part for an expensive piece of furniture, he should inspect the cabinet carefully and insist upon high-grade workmanship.

NOT much variation was found among the three high-fidelity radios tested, though, in general merit, they logically followed the order of their basic prices—the *Linear Standard*, *Futura* and the *WQXR*. The essential difference between the *Linear Standard* and the *Futura* is a matter of undistorted volume, but the *Futura* is more than adequate for the average home in this respect.

Both *Philharmonic* models are quieter than the *WQXR*, while the

WQXR is more sensitive than either *Philharmonic* model, and can be depended upon for reliable reception over greater distances. The *Philharmonic* models employ two speakers, providing better frequency response than the *WQXR* with its single speaker. The *Linear Standard* and the *Futura* are designed for a-c operation only, while the *WQXR* is ac-dc. The bass tone control on the *WQXR* radio is inconveniently mounted on the rear of the amplifier chassis. All three of these receivers showed slight shock hazard.

The *Philharmonic* radios are available in a variety of cabinets, with special loudspeakers, record players and pickups. The basic price includes the least expensive cabinet and a single-record player.

Ratings

INCLUDED in the ratings are two radios selling for less than \$30, on which tests were completed too late for their ratings to be included in the report on cheaper models in the November issue. The position of these radios with respect to models previously rated is indicated; readers are referred to the November report for detailed information.

Also included here is a complete list of the over-\$30 radios tested. Those which have already been described in detail in the December report are listed below merely by make, model, number and price.

Separate listing is given below to radio-phonograph combinations and to high-fidelity receivers. Combinations have been listed in order of general merit of both the radio receiver and the record player (including such features as automatic record changing). On this basis the *Lafayette* Model BB-7, at \$99.95, has been rated as a "Best Buy." For listeners who would prefer somewhat superior radio performance to an automatic record changer, the *Lafayette* BB-13, priced at \$96.50, would constitute a better buy.

Readers are referred to the introductory material in the November and December *Reports* for information on special antennas (loops and other built-in types), push-button tuning, shock hazard, frequency modulation, and the relative values of console and

table models of radios employing a similar chassis.

Unless specifically mentioned, all receivers and combinations are for a-c operation only, are without tuning eye, push-button tuning or special types of antenna, and do not present shock hazard.

UNDER \$30

Acceptable

Sears' Silvertone Cat. No.—6321 (Sears-Roebuck). \$19.95 plus transportation. Small table model. Ac-dc. 6 tubes. 540 to 1,635 kilocycles; 5.9 to 18.2 megacycles. Loop antenna for broadcast band. 2-point tone control. 5 push-buttons. Good tone; fair volume; poor sensitivity on broadcast band. Very good appearance. (This radio rates after the *Lafayette* Model D-42, reported on in the November *Reports*.)

Sears' Silvertone Cat. No.—6325. \$29.95 plus transportation. Medium table model. 8 tubes including tuning eye. 545 to 1,650 and 1,475 to 2,525 (police bandspread) kilocycles; 5.95 to 18.15 and 9.4 to 9.85 (bandspread) megacycles. Loop aerial for broadcast band. 3-point tone control. 6 unsatisfactory push-buttons. Good tone and volume; fair sensitivity; satisfactory selectivity—some whistles. (This radio rates after the *Ward's Airline* Cat. No.—715 in the November *Reports*.)

\$30 TO \$50

Best Buy

Ward's Airline Cat. No.—801¹ (Montgomery Ward). \$43.95 plus transportation.

Also Acceptable

(In estimated order of merit)

Lafayette Model BB-2^{1,2} (Radio Wire Television, Inc., NYC). \$39.95.

Sears' Silvertone Cat. No.—6336. \$47.95 plus transportation. Small console. 10 tubes including tuning eye. 540 to 1,730 kilocycles; 2.25 to 2.6 (bandspread), 5.95 to 18.1, 9.4 to 9.85 (bandspread) and 11 to 12.1 (bandspread) megacycles. 4-point tone control. 6 unsatisfactory push-buttons. Good tone, volume, sensitivity and selectivity. Good appearance—cabinet flimsy. Slight shock hazard.

Philco Model 150-T¹ (Philco Radio & Television Corp., Philadelphia). \$55.

Ward's Airline Cat. No.—714.¹ \$35.95 plus transportation.

Sears' Silvertone Cat. No.—6335. \$37.95 plus transportation. Small console. 8 tubes including tuning eye. 540 to 1,750 kilocycles; 2.3 to 2.55 (bandspread), 5.9 to 18.2 and 9.4 to 9.8 (bandspread) megacycles. 3-point tone

¹For further information see December *Reports*.

²Also available at the same price from Cooperative Distributors, NYC.



THE RCA RECORD CHANGER

... was occasionally stumped by some records

control. 6 unsatisfactory push-buttons. Fair tone; good volume; good sensitivity and selectivity. Fair appearance—cabinet work inferior. Slight shock hazard. Sloppy workmanship.

Not Acceptable

Zenith Model No. 6-P-448¹ (Zenith Radio Corp.). \$49.95.

¹ For further information see December Reports.

\$50 TO \$100

Best Buys

Lafayette Model BB-111.^{1,2} \$64.50.

Ward's Airline Cat. No.—1000.¹ \$55.95 plus transportation.

² Also available at the same price from Cooperative Distributors, NYC.

Also Acceptable

(In estimated order of merit)

Ward's Airline Cat. No.—1201.² \$73.95 plus transportation.

Sears' Silvertone Cat. No.—6337.¹ \$67.95 plus transportation.

RCA Victor Model K-80¹ (RCA Mfg. Co., Camden, N. J.). \$69.95.

Farnsworth Model AC-56^{1,2} (Farnsworth Radio & Television Corp., Fort Wayne, Ind.). \$54.95.

RCA Victor Model T-80.¹ \$54.95.

RCA Victor Model K-60.¹ \$59.95.

Philco Model 165-K. \$62.50. Small console. 6 tubes. 540 to 1,550 kilocycles; 1.5 to 3.5 and 6 to 18 megacycles. Loop and built-in aerials. Continuously variable tone control. 5 satisfactory push-buttons best set by serviceman. Good tone and volume; fair sensitivity and selectivity—whistles bad. Very good appearance—better than average cabinet work. Shock hazard negligible.

Stewart-Warner Model 01-817¹ (Stewart-Warner Corp., Chicago). \$79.95.

GE Model H-77^{1,2} (General Electric Co., Bridgeport, Conn.). \$79.95.

Chassis Duplication Table

IN THE following table, the basic model was tested in CU's laboratory and is rated in the present series of radio reports. Other models listed in the same group use the same essential chassis, but may have different equipment such as additional wave bands, a more elaborate cabinet or a larger speaker. Automatic radio-phonograph combinations are indicated by the abbreviations: "Auto. Radio-Phon." A number of models tested and rated do not appear in this listing because no other models were known to be using the same chassis.

Standard Receivers

Basic Model	Other Models	Type	Price (\$)
Ansley D-10	D-17	Radio-Phon. console.....	140.00
	D-23	Armchair Radio-Phon.....	115.00
	D-18	Auto. Radio-Phon.....	185.00
	U-10	Radio only—table model.....	44.50
Farnsworth AC-56	AC-55	Smaller console.....	49.95
GE H-77	H-73	Console.....	59.95
Lafayette BB-2	BB-4	Console.....	39.95
	BB-7	Auto. Radio-Phon.....	99.95
	BB-8	Radio-Phon.....	84.95
Lafayette BB-11	BB-12	Auto. Radio-Phon.....	109.95
	BB-13	Radio-Phon.....	96.50
	BB-14	Auto. Radio-Phon. (period cabinet).....	139.95
	BB-15	Radio-Phon. (period cabinet).....	127.50
	BB-16	Auto. Radio-Phon. (modern cabinet).....	134.95
	BB-17	Radio-Phon. (modern cabinet).....	119.95
Philco 150-T	155-T	Table ¹	65.00
	180XF	Console.....	75.00
	185XX	Console ¹	85.00
	190XF	Console ¹	92.50
Philco 195XX	200XX	Console ¹	139.50
Sears' Silvertone—6321 ...	—6323	Ivory cabinet.....	20.95
	—6322	Early American cabinet.....	20.95
Sears' Silvertone—6335 ...	—6490	Period console.....	59.95
	—6495	Modern console.....	47.50
Ward's Airline—714	—715	Table model ²	29.95
Ward's Airline—801	—800	Large table model.....	34.95
	—805	Auto. Radio-Phon.....	91.95
Ward's Airline—1000	—1001	Console.....	59.95
Zenith 6-P-448	6-P-429	Table model.....	34.95
	6-P-430	Table model.....	39.95
	6-R-485	Radio-Phon.....	69.95

High-Fidelity Receivers

Philharmonic Futura	Carillon	Radio-Phon.....	219.00
		Auto. Radio-Phon. Non-mixer changer.....	244.00
		Auto. Radio-Phon. Mixer changer.....	272.00
Philharmonic Linear Standard	Croydon	Radio-Phon.....	295.00
		Auto. Radio-Phon. Non-mixer changer.....	320.00
		Auto. Radio-Phon. Mixer changer.....	348.00
WQXR	CU-13	Radio-Phon.....	190.00
		Auto. Radio-Phon.....	245.00

¹ Has minor circuit change consisting in substitution of two tubes for a dual purpose tube.
² This model was rated in the November Reports.

\$100 AND OVER

Acceptable

Philco Model 195XX. \$105. Large console. 10 tubes. 540 to 1,550 kilocycles; 1.5 to 4 and 6 to 18 megacycles. Loop and built-in aerials. Continuously variable tone control. 8 very satisfactory push-buttons best set by serviceman. Very good tone; good volume; good sensitivity and selectivity—whistles bad. Excellent appearance. Slight shock hazard. Loop effective in reducing man-made static noise. Overpriced. Except for appearance and better push-button action, no better than *Lafayette BB-11* at \$64.50.

Philco Model 205RX "Mystery Control." \$169.50. Large console. 12 tubes including 5 remote control tubes. 550 to 1,600 kilocycles. Loop aerial. Continuously variable tone control. Good tone and volume; fair sensitivity; good selectivity—some whistles. Excellent appearance—cabinet work above the average. Slight shock hazard. Loop effective in reducing man-made static noises. Radio performance equivalent to that of a 7-tube receiver, which should sell for not more than \$60. Good buy, however, if remote

² Price has been increased, changing its position in the ratings as compared with the December ratings.

control feature is worth \$109.95 to the purchaser. Remote control box is reliable and will operate the radio from any point in the average home, including tuning, volume and turning off. It will not turn the radio on. Box is small, light (5 lbs.) and of good appearance. Inexpensive bat-

teries will last for more than a year of average use. No wires connected to the control box. Any desired 8 stations may be "dialed" from the control unit. Quality, volume, selectivity and background noise are not affected by the "Mystery Control" if properly set up by serviceman installing the radio.

cycles; 5.9 to 18.3, 9.4 to 9.8 (bandspread) and 11 to 12 (bandspread) megacycles. Loop and built-in antennas. 4-point tone control. 6 unsatisfactory push-buttons. Good sensitivity, except on 9.4 to 9.8 megacycle band; good selectivity. Poor cabinet work—only fair appearance. Radio difficult to service (chassis suspension may give trouble). Slight shock hazard. RCA record changer. Same comments apply as for the *Ward's Airline* Cat. No.—805, except that there is sufficient room for easier removal of 12-inch records. Phonograph motor very noisy. Phonograph quality only fair.

RADIO-PHONOGRAPHS

Best Buy

Lafayette Model BB-7.² \$99.95. Large low boy console with top closing over radio controls. 8 tubes including tuning eye. See *Lafayette BB-2* in *December Reports* for data on radio. Very good tone and volume. Garrard automatic record changer for 10- and 12-inch records not mixed. Needle easy to insert. Reliable operation. Excellent appearance.

Also Acceptable

(In estimated order of merit)

Lafayette Model BB-13.² \$96.50. Tall console with radio in the center with exposed radio controls. 11 tubes including tuning eye. See *Lafayette BB-11* in *December Reports* for data on radio. Very good tone and volume. Good appearance. Garrard single record player. Needle easy to insert. Stop reliable when properly adjusted.

Ansley Dynaphone Model D-10 (Ansley Radio Corp., NYC). \$84.50. Medium table model. Ac-dc. 7 tubes. 550 to 1,700 kilocycles; 6 to 20 megacycles. Continuously variable tone control. Exceptionally good tone for a receiver this size both on radio and phonograph. Good volume; good sensitivity and selectivity on both bands—some whistles. Excellent appearance. Slight shock hazard. Mechanical construction above average. In all-around value, does not compete with the *Lafayettes* rated above. However, for a person who desires a high-grade table model radio-phonograph combination in a better cabinet and is willing to pay for it, the *Ansley D-10* is an excellent buy.

Ward's Airline Cat. No.—805. \$91.95 plus transportation. Low boy console with radio controls completely enclosed. 8 tubes including tuning eye. See *Ward's Airline* Cat. No.—801 in *December Reports* for data on radio. This model does not check with the

catalog illustration which shows a somewhat different cabinet and a record changer that resembles the *Garrard*. This model is equipped with the RCA record changer. Difficult to remove 12-inch records due to cramped cabinet space. Needle difficult to insert. Automatic record changer unsatisfactory. Conservative and attractive appearance.

Sears' Silvertone Cat. No.—6346A. \$77.95 plus transportation. Low boy console with radio controls enclosed. 11 tubes including tuning eye. 540 to 1,750 and 1,680 to 5,200 kilo-

Not Acceptable

Zenith Model 6-R-485. \$69.95. Console. 5 tubes. See *Zenith 6-P-448* in *December Reports* for data on radio. Phonograph design unsatisfactory. Record player is in center of cabinet (with radio on top). Difficult to insert needle and place tone arm in playing position. No automatic stop. Bad hum. Slight shock hazard. Poor appearance.

HIGH-FIDELITY COMBINATIONS

Acceptable

(In order of tone quality)

Philharmonic Linear Standard "Croydon" (Philharmonic Radio Co., NYC). \$295. Large console radio-phonograph. 14 tubes including tuning eye. 550 to 1,600 kilocycles. 4-point treble and 6-point bass tone control. Each tone control operates independently of the other so that if bass is boosted, none of the treble is lost. Equipped with a double-speaker system using a 15-inch low-frequency speaker in a bass reflex enclosure and a 6-inch high-frequency speaker. Quality of reproduction judged best of high-fidelity radios tested. For critical listeners who want the best possible tone quality regardless of price, the extra cost of this model is justified, but the *Futura* model will give reproduction which will be found perfect by most persons.

Philharmonic Futura "Carillon." \$219. Large console radio-phonograph. 11 tubes including tuning eye. Tuning range and tone controls are the same as for the *Linear Standard*. Equipped with a double-speaker system using a 12-inch low-frequency speaker in a bass reflex enclosure and

a 6-inch high-frequency speaker. Sensitivity and selectivity equivalent to *Linear Standard*, but audio amplification system less powerful—adequate for the average living room. Difference in quality of reproduction between this model and the *Linear Standard* discernible only to the musician or engineer. To the average listener the tone quality of this set will be considered perfect.

WQXR CU-13 (Interstate Broadcasting Co., NYC). \$190. Large console radio-phonograph. Ac-dc. 14 tubes including tuning eye. 550 to 1,700 kilocycles. Continuously variable treble and bass tone controls (bass control on rear of chassis). More sensitive than either *Philharmonic* model. Selectivity variable in two steps. Equipped with single 12-inch speaker in "infinite baffle" enclosure. Power output (volume) less than that of *Philharmonic Futura*, but considered adequate for average home use. Tone quality nearly as good as in *Philharmonic* radios; difference discernible only to the trained ear. Should be considered a "Best Buy" among high-fidelity radios for persons located in d-c localities; where a-c is available, the *Philharmonic Futura* should be worth the difference in price.

²Also available at the same price from Cooperative Distributors, NYC.

Breakfast Cereals

... are a fairly cheap form of calories and very little else. Whole-grain wheat and corn contain valuable nutritive elements, most of which are lost when the grain is refined and processed—at great expense to the consumer

WITH a loyalty that is all too rare these days, Shirley Temple still says of *Quaker Puffed Wheat*, as she did more than two years ago: "This is my cereal." And on the whole breakfast cereal promotion remains much as it was when CU last reported on the subject (October 1937).

In 1937 Helene Madison illustrated, on the back label of *Huskies*, "How to develop winning form in the pool." Now a series of pictures of Pete des Jardins shows "How to develop winning form in diving." Mickey Mouse continues on *Post Toasties*; Kellogg's *Rice Krispies* has moved on from fables told by its Singing Lady to wall plaques of Mother Goose rhymes; *Force* continues its thrilling comic strips of the adventures of Bobbie Benson.

What's inside the boxes remains pretty much the same, too. Most packaged breakfast cereals still are a fairly

cheap form of calories and little else. They contain 65% to 90% carbohydrates, and about 6% to 17% protein. In the whole-grain cereals, phosphorous, iron, and vitamin B₁ are present in the germ and in the bran layer; but most of these valuable elements are lost when the grain goes through the refining or milling process.

Uncooked whole-grain cereals, such as rolled oats and *Wheatena*, offer

much better value than processed or prepared cereals, as might be expected. They are a good source of vitamin B₁, a vitamin which is not present in adequate amounts in the average diet. They are more time-consuming to prepare, since they must be cooked and eaten warm.

Nevertheless, their advantage in price and nutritive value is considerable. *Sunnyfield Yellow Corn Meal*, for example, offers several times as many calories for the same price as *Kix*, a prepared corn cereal. *Quaker Puffed Wheat*, which is "shot from guns," and thereby has most of its vitamin content destroyed, costs six times as much as an equivalent amount of *GLF Rolled Wheat*, which is a good source of B₁.

Corn is the cheapest of the uncooked cereals; wheat is the most expensive. Among prepared varieties, value ranges from *Quaker Puffed Wheat* (40 cal-



SHOT FROM GUNS

This brand costs 10¢. This half serving is .66¢ worth

Processed Cereals

BRAND AND MANUFACTURER	COST PER PACKAGE (¢)	OUNCES PER PACKAGE	COST PER AVERAGE SERVING (¢)	CALORIES PER SERVING	CALORIES PER 4
Processed Wheat Cereals					
<i>Shredded Wheat</i> (National Biscuit)	12	12	1.05	120	110
<i>Co-op Wheat Flakes</i> (Central Co-op. Wholesale) ¹	10	10	1.23	135	110
<i>Shredded Ralston</i> (Ralston Purina)	14	12	1.23	120	100
<i>Sunshine Rippled Wheat</i> (Loose-Wiles)	10	9	0.39	40	100
<i>Sunnyfield Wheat Puffs</i> (A&P)	5	4	0.66	60	90
<i>Kellogg's Krumbles</i> (Kellogg)	12	9	1.88	155	80
<i>Huskies</i> (General Foods)	12	8½	1.75	135	80
<i>Force</i> (Hecker Prod. Corp.)	12	9	1.41	115	80
<i>Grape-Nut Flakes</i> (General Foods)	10	7	1.51	115	80
<i>Wheaties</i> (General Mills)	12	8	1.86	135	70
<i>Grape-Nuts</i> (General Foods)	18	12	1.59	115	70
<i>Kellogg's Wheat Krispies</i> (Kellogg)	13	8	2.29	155	70
<i>Quaker Puffed Wheat</i> (Quaker Oats)	10	3½	1.51	60	40
Processed Corn Cereals					
<i>Sunnyfield Corn Flakes</i> (A&P)	5	8	0.66	115	170
<i>Co-op Corn Flakes</i> (Central Co-op) ¹	9	13	0.72	115	160
<i>Post Toasties</i> (General Foods)	7	8	0.93	115	120
<i>Kellogg's Corn Flakes</i> (Kellogg)	8	8	1.05	115	110
<i>Kix</i> (General Mills)	13	7	1.98	115	60
Processed Rice Cereals					
<i>Sunnyfield Rice Puffs</i> (A&P)	5	4½	0.60	60	100
<i>Heinz Rice Flakes</i> (Heinz)	12	6½	2.00	105	50
<i>Quaker Puffed Rice</i> (Quaker Oats)	10	4	1.3	60	50
<i>Kellogg's Rice Krispies</i> (Kellogg)	12	5½	2.7	135	50
Bran and Part-Bran Cereals					
<i>Co-op 40% Bran Flakes</i> (Central Co-op) ¹	10	10	0.53	55	100
<i>Kellogg's Pep</i> (Kellogg)	12	10	1.26	115	90
<i>Post's 40% Bran Flakes</i> (Gen. Foods)	10	8	0.66	55	80
<i>Pillsbury's Wheat Bran</i> (Pillsbury)	19	20	0.067
<i>Kellogg's All-Bran</i> (Kellogg)	21	16	0.093

¹Superior, Wis.

ories per penny) to *Sunnyfield Corn Flakes* (170 calories per penny).

Sunnyfield puffed products have the disadvantage of being packed in a single cellophane bag that permits the cereals to absorb moisture and lose their crispness quickly once the package has been opened (if they are kept in a tin box this difficulty will be overcome). And a real disadvantage in the use of this or any other dry processed cereal is that they probably contribute to the development of tooth decay (see *CU Reports*, November 1939). Taste, of course, is something else again.

OF NUTRITIONAL value there is little new to be said. Whole-grain wheat and corn cereals provide a large amount of calories in the form of starches and sugars, along with respectable amounts of minerals and vitamins, particularly B₁. Refined or

processed cereals have practically no vitamin and little mineral value. Some manufacturers sell bran—the portion of the wheat that has been removed in the production of refined cereals.

Bran cereals contain more vitamins and minerals than do the refined cereals, but they *can* be dangerous. Dr. Gerry Morgan, in a lecture under the auspices of the U. S. Public Health Service, several years ago, had this to say about bran:

Whereas approximately a third of those eating bran are able to take it over an indefinite length of time without apparent harmful results, and even with temporary relief from a constipated condition, yet by far the larger proportion of bran eaters develop a deep-seated irritation in one part or another of the intestinal tract. It is the opinion of excellent authorities that this irritation is often the fundamental condition leading to ulceration by producing localized areas of congestion and superficial loss of the mucous membrane, thus creating a suitable field upon which subsequent disease may develop. In a majority of cases, after a shorter or longer period, bran not only ceases to relieve

constipation, but sets up localized spasm in different segments of the colon, thus developing a secondary constipation which at times is difficult to cure.

Yet Kellogg continues to advertise *All-Bran* in newspapers and magazines as a cure for constipation. Dr. Morgan's comment applies to part-bran cereals as well, such as *Post's 40% Bran Flakes*, and *Kellogg's Krispies*, although to a lesser degree.

With regard to the mineral content of cereals, whole-grain wheat, oats and rice may be regarded as good sources; corn cereals are fair; refined cereals, including farina, prepared rice cereals and white rice, are poor sources.

The accompanying tables list most well-known brands of breakfast cereals, cooked and uncooked. The last column (calories per penny) represents the real money value of the different items. The two preceding columns are, however, worth noting. Because of shape, degree of puffiness, &c., the various cereals are customarily served in different amounts, so that, in addition to the calorie per penny value, the cost per serving and the calories in each serving are also significant. In the price comparisons, no allowance has been made for the cost of cooking the uncooked cereals, which, except in places where the price of fuel is unusually high, should be insignificant.

Uncooked Cereals

BOARD AND MANUFACTURER

COST PER
PACKAGE
(¢)

OUNCE PER
PACKAGE

COST PER
AVERAGE
SERVING
(¢)

CALORIES
PER
SERVING

CALORIES
PER
¢

Uncooked Wheat Cereals — Refined

<i>Co-op Wheat Hearts</i> (Central Co-op) ¹	19	40	0.51	110	220
<i>Ann Page Mello Wheat</i> (A&P).....	15	28	0.38	70	190
<i>Co-op Fancy Farina</i> (Central Co-op) ¹	9	14	0.69	110	160
<i>Pillsbury's Farina</i> (Pillsbury).....	10	14	0.75	110	150
<i>5-Minute Cream of Wheat</i> (Cream of Wheat).....	23	28	0.87	110	130
<i>Hecker's Cream Farina</i> (Hecker)	12	14	0.90	110	120
<i>Cream of Wheat</i> (Cream of Wheat)	14	14	1.05	110	100

Uncooked Wheat Cereals — Unrefined

<i>GLF Rolled Wheat</i> (Cooperative G.L.F. Prod.) ^{2,3}	15	32	0.51	115	230
<i>Post-O</i> (General Foods).....	14	24	0.63	110	170
<i>Milkweato</i> (Cooperative G.L.F.) ²	21	32	0.69	110	160
<i>Wheatworth Cereal</i> (Natl Biscuit)	16	20	0.84	115	140
<i>Ralston Wheat Cereal</i> (Ralston) ³	23	24	1.02	110	110
<i>Wheatena</i> (Wheatena).....	23	22	1.11	110	100
<i>Pettijohn Rolled Wheat</i> (Quaker) ³	19	22	0.90	115	130

Uncooked Oat Cereals

<i>Sunnyfield Rolled Oats</i> (A&P).....	8	20	0.28	80	280
<i>GLF 50-50 Rolled Wheat and Oats</i> (Co-operative G.L.F. Prod.) ²	13	32	0.28	80	290
<i>Quick Quaker Oats</i> (Quaker Oats).....	9	20	0.32	80	250
<i>Quaker Oats</i> (Quaker Oats) ³	9	20	0.32	75	240
<i>Milkoato</i> (Co-operative G.L.F.) ^{2,3}	19	32	0.42	80	190
<i>H-O Quick Oats</i> (Hecker Prod. Corp.)	12	20	0.42	80	190

Uncooked Corn Cereals

<i>Sunnyfield Yellow Corn Meal</i> (A&P)	7	24	0.45	160	360
<i>Quaker Yellow Corn Meal</i> (Quaker) ³	10	24	0.68	160	240

Uncooked Rice Cereals

<i>Reeves' White Rice</i> (Daniel Reeves)	10	16	0.44	70	160
<i>Comet Brown Rice</i> (Whole Grain Comet Rice Mills).....	9	12	0.52	70	130

¹Superior, Wis.

²Buffalo, N. Y.

³Package examined found to be slack-filled



WRAPPED IN CELLOPHANE

This brand costs 5¢. This full serving is .66¢ worth

Technical Section • 15

Frozen Foods

... today can be of great help to the housewife in planning a well-balanced (if not very economical) menu

IT IS a dark Winter afternoon in a small town. Mrs. Jones, who has to have dinner ready for her family within an hour, goes to the low-temperature compartment of her refrigerator and takes out a few cartons. An hour later her family sits down to a dinner of mango, game, fresh peas, and corn on the cob, with strawberries for dessert.

Although this little scene (except for the game) takes place in some American homes now, it is not exactly universal yet. It may be (including the game) in the near future—if a number of things occur. It may, too, give some indication of what the frozen foods industry can do for the American consumer as well as for itself.

Most of the methods for preserving food—for protecting it during storage against the micro-organisms and chemical reactions which cause spoilage—have the common defect that they cause rather pronounced changes in flavor, aroma, texture and consistency of the original foodstuffs. Canning¹ involves precooking of the food. Ordinary freezing involves slow cooling of the food before freezing and, usually, thawing of it before it is sold. Investigations have shown that when plant material, such as a stalk of asparagus, is slowly cooled below the freezing point, relatively large ice crystals form within the tissues, expanding and breaking down the cell walls. When such slow-frozen material is thawed, a limp, unappetizing mass usually results, and a considerable amount of the plant liquids leaks out. Similar changes take place in frozen animal tissues, though to a less extent.

When plant or animal material is quick-frozen, on the other hand, only small ice crystals form and the cell



structure is not appreciably damaged. Foods, by this process, are rapidly cooled throughout to a very low temperature and kept at 0° F. until sold to the ultimate consumer. From this fact, in large measure, comes the undoubted superiority of quick freezing over other methods of food preservation.

TO BEGIN with, only certain foods freeze well and, of these, only certain varieties, which must be chosen carefully. The soil, the fertilizer, the method of cultivation may strongly influence the quality of fruits and vegetables. Since the freezing process cannot improve flavor, for best results only the best part of the crop can be

frozen. Plant foods must have reached just the right degree of maturity, animal foods must be of proper size or age.

All material must be thoroughly cleaned before freezing, with all inedible portions removed along with foreign material, insects and insect-spray residues. For best results the preparatory processes have to be carried out with great speed.

These processes are frequently rather complicated, and thus considerable skill is required. Fruits are washed, cleaned, sorted, usually sliced, sometimes pulped before freezing, and they are customarily packed with large amounts of added sugar; freezing fruits without sugar would be desirable for many uses but has not so far been successfully accomplished.

Vegetables are washed, graded, trimmed, and blanched with hot water or steam to destroy enzymes which would in time ruin the color and flavor. Fish are usually brought directly from the boats, cleaned, washed, and frozen whole or cut into fillets. Meats are usually frozen and packaged as individual cuts, and poultry is dressed, frozen whole for roasting or in small pieces for frying, and individually wrapped.

Deterioration takes place rapidly after the food is picked or killed until it is frozen. It is therefore important that the freezing plant be located near the source of raw food material. Portable freezers are often taken to the fields where vegetables are grown to avoid shipping delays. *Fortune* (June 1939) describes how the Birds Eye Co. rushes peas "from vine to icy warehouse in four hours flat."

Once the food has reached the "icy warehouse," a variety of ingenious

Cold-Storage Lockers

AN INTERESTING offshoot of the frozen food industry is the very rapid spread of cold-storage plants, with individual lockers in which families may keep 200 pounds or more of quick-frozen meats, fruits and vegetables. These plants present interesting possibilities for cooperatives, enabling members to buy large quantities of meat and frozen fruits and vegetables cheaply, removing small quantities from their lockers as needed.

The plan should also make a strong appeal to farmers who can bring to the locker plant meat, fruits and vegetables for their own use throughout the year.

Estimates of the savings which a family can make range from \$25 to \$100 a year, allowing for the locker rental of about \$10 to \$15 a year and processing charges. (For detailed information regarding locker plants, write your State Agricultural Experiment Station.)

¹ Discovered in 1804, by Nicholas Appert, who was seeking a 12,000-franc prize offered by the French Government for the best method of preserving food for Napoleon's armies.

methods have been devised for carrying out the actual freezing. In the Birds Eye process, which is the most widely used, the suitably prepared foodstuff in its final retail packages is placed between a series of hollow refrigerated metal plates in an insulated cabinet. The plates are then closed, compressing the cartons slightly, and a refrigerant is passed through the plates until the entire contents have been cooled to the required subfreezing temperature.

Other methods include direct immersion of the foodstuff in frigid brine or syrup; placing the food in metal pans immersed in rivers of icy brine; running the food between two endless metal conveyor belts on which cold brine is sprayed; pushing the food in freezing cans through metal tunnels surrounded by brine; or, with the "Z process," developed by Zarotschenzeff, direct freezing of the food by an intense spray or fog of refrigerated brine. For poultry, a method has been developed of passing a tube through the eviscerated body cavity of the bird and running refrigerated brine through it.

AFTER freezing come packaging, storage, transportation. Moisture-proof wrappers are essential to prevent dehydration by the cold dry air of storage rooms. Packages in which actual freezing is accomplished must have low heat-insulating value to permit quick freezing, but packages for shipment and home delivery, on the other hand, should have high insulating value. (Birds Eye, which is frozen in its final retail package, has low insulating value when it finally reaches the consumer.) Most retail packages are now made of moisture-proofed parchment, paper, cellophane or cardboard. Also used to some extent are metal cans and glass containers, although a possible objection to these is that uninformed buyers may store them before use like ordinary canned goods.

The food must be kept at a near-zero temperature until just before it is cooked and eaten. Thus storage in refrigerated warehouses is required, as well as transport in special refrigerated freight cars or trucks, and storage at the grocer's in special low-temperature cabinets. The provision of such cabinets has been no mean

SUBJECT TO CHANGE WITHOUT NOTICE
Taxes Subject to approval of the Credit Dept.
This List Effective August 31, 1939



Destroy your old price list of June 1

PRICE LIST

		DEALER'S SELLING PRICE		SUGGESTED	
		COST		COST	
FRUITS and BERRIES		Package		POULTRY (Continued)	
BLUEBERRIES, Large, Fancy	11 oz.	.17	.23	FRYERS (Whole, split only)	Pound
PEACHES, Sliced, Sw't'd	16 oz.	.19	.25	3 lb. 11 oz. to 2 1/2 lbs.	.37* .47*
RASPBERRIES, Red, Ripe	10 oz.	.17	.23	ROASTING CHICKENS	
RHUBARB, 1" Uncooked	14 oz.	.11 1/2	.15*	2 lbs. 8 1/2 oz. to 3 lbs. 11 1/2 oz.	.39* .49*
STRAWBERRIES				ROASTING CHICKENS	
Sliced, Sweetened	16 oz.	.19	.25	3 1/2 lbs. and up	.41* .53*
YOUNGBERRIES				FOWL FOR FRICASSEE, 2 1/2 lbs. avg.	.37 .49
Seedless, for dessert	10 oz.	.12 1/2	.17*	DUCKLINGS, 4 1/2 lbs. avg.	.38 .39
VEGETABLES		Package		TURKEYS, 14 1/2 lbs. and up	.42 .53
ASPARAGUS CUTS				BEEF-STEAKS	
All green—1 1/2" cuts	12 oz.	.20 1/2	.27*	Pound	
ASPARAGUS TIPS				1/2" SIRLOIN MINUTE STEAK	
Green Tips Only	82 oz.	.26	.35	Bone in 12 pcs. 6 lbs.	.57 .73
BEANS, GREEN, 1" Cut	10 oz.	.12 1/2	.17*	1" SIRLOIN STEAK	
BEANS, GREEN, French Style	10 oz.	.15 1/2	.21*	Bone in 6 pcs. 5 lbs.	.57 .73
BEANS, LIMA, Baby Green	12 oz.	.19	.25	1" SIRLOIN STEAK	
BEANS, WAX, 1" Cut	10 oz.	.12 1/2	.17*	Boneless 6/9 pcs. 6 lbs.	.62 .79
BROCCOLI, Green side shoots	13 oz.	.19	.25	1 1/2" SIRLOIN STEAK	
BRUSSELS SPROUTS, Trim'd	13 oz.	.19	.25	Boneless 5 pcs. 6 lbs.	.62 .79
CAULIFLOWER, Florets only	13 oz.	.17	.23	1" TENDERLOIN STEAK	
CORN ON COB, G. B.	4 1/2 ears	.12	.16	Fillet 12/24 pcs. 5 1/2 lbs.	1.02 1.29
CORN, CUT				1" RUMP STEAK	
G. B. Whole Kernel	13 oz.	.17	.23	Boneless 9 pcs. 6 lbs.	.55 .69
PEAS, Shelled	12 oz.	.19*	.25*	CHOPPED STEAK	
PEAS & CARROTS				8 oz. units 12 pcs. 6 lbs.	.27 .35
Ready to cook	12 oz.	.17	.23	BEEF-ROASTS	
SPINACH, Washed	14 oz.	.17	.23	Pound	
SQUASH, Cooked	16 oz.	.14	.19	CHUCK ROAST, Boneless	
FISH		Pound		3 1/2 lbs. avg.	.35 .45
COD FILLETS, 7 to 9	5 lbs.	.19	.23	POK ROAST, Boneless, 3 1/2 lbs. avg.	.31 .39
HADDOCK FILLETS, 7 to 9	5 lbs.	.19	.25	RIB ROAST, Bone & Rolled	
HALIBUT FILLETS, 8 to 10	5 lbs.	.32	.42	4 lbs. avg.	.39 .49
MACKEREL FILLETS, 8 to 10	5 lbs.	.19	.25	FACE RUMP ROAST, Boneless	
RED FISH FILLETS, 8 to 11	5 lbs.	.19*	.25*	4 1/2 lbs. avg.	.33 .42
SOLE FILLETS, 12 to 14	5 lbs.	.25	.33	BACK RUMP ROAST, Bone in	
HALIBUT STEAKS, 8 to 10	5 lbs.	.34	.45	4 lbs. avg.	.31 .39
SALMON STEAKS, 8 to 10	5 lbs.	.25*	.33*	SIRLOIN ROAST, Bone & Rolled	
SWORDFISH STEAKS, 8 to 10	5 lbs.	.34*	.45*	4 lbs. avg.	.55 .69
SHELLFISH		Package		BEEF FOR STEW	
CRAZMEAT				Cubes, 8 oz. units 12 pcs. 6 lbs.	.28 .36
Cooked, Ready to serve	10 oz.	.19	.25	LAMB CHOPS	
LOBSTER MEAT, Ready cooked				Pound	
Equals 3 lbs. live lobster	10 oz.	.72	.95	1" LOIN KIDNEY CHOPS	
OYSTERS, Blue/wh. Solid pack	12 oz.	.27	.35	Trimmed 18 pcs. 5 lbs.	.51 .65
SCALLOPS				1" RIB CHOPS, Trim'd, 18 pcs. 5 lbs.	.35 .45
Fancy, Tender variety	12 oz.	.26*	.35*	LAMB ROASTS	
SHRIMP, Cooked, Peeled	12 oz.	.27	.35	Pound	
POULTRY		Pound		LEG ROASTS	
SQUAB BROILERS				Whole or Half 4 1/2/6 lbs.	.38 .45
12 to 14 1/2 oz.	Ctn. 2 pieces	.49*	.63*	FOREQUARTER ROASTS	
BROILERS				Boneless 3 1/2/5 lbs.	.22 1/2 .29
15 to 22 1/2 oz.	Ctn. 2 pieces	.46*	.59*	LAMB FOR STEW	
BROILERS Individually stockinette				8 oz. units 12 pcs. 6 lbs.	.28 .36
10 to 28 oz. wrapped		.43*	.55*	PORK and VEAL	
COUNTRY STYLE FRYERS (Cut up)				Pound	
1 lb. 11 oz. to 2 1/2 lbs.		.39*	.49*	1/2" PORK CHOPS, Center Cut 6 lbs.	.30 .39
				1/2" PORK CHOPS, End Cut 6 lbs.	.22 1/2 .29
				PORK LOIN ROASTS	
				Chine End 1 1/5 lbs.	.22 1/2 .29
				SAUSAGE LINKS	
				8 oz. units 8 pcs. 4 lbs.	.29 .38
				CALVES LIVER, Sliced, 1/2 lb. c't'ns	.35 ctn. .45 ctn.

* Designates change from previous list.
- Packed 6 ears to box.

FROZEN FOODS PRICE LIST

The dealer's list shows his costs and yours

problem for the industry. For at first they cost anywhere from \$1,000 to \$1,800. By 1934 their cost, with better designing, had come down to about \$300. But even \$300 is a considerable sum to small dealers; they would have to sell a lot of frozen foods to pay back that initial investment, to say nothing of increased electric bills and occasional servicing charges.

Birds Eye, recognizing that foods had to be available in neighborhood stores if they were going to be bought, solved the problem by rent-

ing cabinets to dealers for \$10 or \$12.50 a month, depending on size. This came to less than time payments toward owning a box plus servicing charges, and besides, after the box had been in a store for more than three years, the rent dropped to a service charge of \$5 a month. To date this arrangement seems to have worked pretty satisfactorily for company and dealers alike. For the latter, there is a fixed monthly charge; there are never any mounting service charges to eat up a small profit. For the company, it is an excellent way

Which Brand is Best?

BECAUSE of the widespread interest in frozen foods, CU would like to give brand ratings of these products. Unfortunately, under present conditions this is virtually impossible. For one thing, there are no national brands as yet. Even Birds Eye, the largest company, has its business heavily concentrated in the Northeastern States and, although it is rapidly expanding into the Midwest and South, cannot attain anything like national distribution before the end of 1940.

Further, since consumers in a given town or neighborhood usually have only one or, at the most, two frozen food brands to choose from, brand ratings in CU's usual manner would have little value.

The complicated distributional setup would cause further difficulty in giving ratings. Often frozen products from many packers are bought up by a single broker or wholesaler and sold under one brand name to retailers.

In other cases, packers market their products cooperatively under their own brand name. Even Birds Eye, which controls many products all the way from furnishing seed to the farmers to inspecting cabinets in grocery stores, does not freeze food in its own plants, but contracts to have it done by packers using Birds Eye equipment. Thus, the testing of one or even several samples of a certain brand would have very little meaning toward rating the brand as a whole.

Until such time as national tests

become practical, local consumer groups or women's clubs may find it interesting and profitable to compare flavor, color, texture and cost per pound of typical frozen foods sold in their locality with other brands and with the corresponding canned and fresh foods.

Of possible help to some CU members may be the following information on two leading brands:

Birds Eye (Frosted Foods Co., Inc., subsidiary of General Foods Corp.). Widely distributed in Northeastern States, rapidly spreading to other parts of the country, Birds Eye is the largest and most experienced of the frozen food packers. The company is generally credited by unbiased experts with maintaining a unique degree of quality control over every phase of the production and distribution of its product. Quality of products is generally but not invariably high.

Honor Brand (Honor Brand Frosted Foods Corp., subsidiary of Stokely Bros. & Co.). Limited distribution, mostly in the East. Some of the products of this company are reported to be good, others mediocre. The company has not in the past maintained close quality control over the packing of its products, but is believed to be now improving in this respect.

Information on other frozen food brands and companies is as yet too limited for general comments.

Which Foods Are Best?

ALSO of possible help to consumers may be the following summary of the "freezability" of various foods:

Vegetables. Better than fresh product unless latter is fresh picked: peas, corn. Almost indistinguishable (when cooked) from the cooked fresh product: string beans, lima beans, spinach. Broccoli freezes well. Cauliflower is satisfactory, but not important because of the availability of the fresh product throughout the year. Green beans are generally good, if the beans frozen are tender and free of woody tissues. Asparagus is likely to collapse badly on thawing, but after cooking usually compares favorably in ap-

pearance and flavor with the cooked fresh product. Vegetables customarily eaten raw do not freeze well; lettuce, tomatoes, cucumbers, onions are unsatisfactory.

Fruits. Most difficult foods to freeze. Nearly all frozen fruits need sugar-packing and even then frequently give poor results.

Meats. Generally good, although fresh meat is probably a better buy in most cases.

Poultry. Generally good; decidedly superior to "cold storage" poultry.

Fish. Better than most fresh fish, except for persons living near seaboard. Unfrozen fresh fish deteriorates very rapidly.

of controlling the dealer—into Birds Eye boxes nothing may go which is not made by Birds Eye.

These cabinets are, of course, essential. Food once thawed cannot be refrozen without serious damage to its quality, although careless or unscrupulous dealers do occasionally sell such food. And even still-frozen foods deteriorate much more rapidly at temperatures approaching the freezing point than at sub-zero temperatures.

Frozen food ordinarily should begin to thaw for the first time soon after it is removed from the retailer's cabinet. An ordinary home refrigerator can delay the thawing but cannot prevent it, except in the ice-cube compartment. Some new refrigerators, with special low-temperature compartments for frozen food, permit home storage for an indefinite period.

Quick freezing does *not* kill all the bacteria present; it merely stops their growth. Some bacteria can live for months or even years at subfreezing temperatures, then "wake up" and begin to grow, often more rapidly than in fresh food. That is why frozen foods cannot be stored in an ordinary cupboard as tinned foods may be.

It is important, also, to follow the cooking directions on the package. Because of the quality of the food frozen, which is in some cases higher than that of fresh or canned foods, and because of changes in freezing and thawing, cooking frozen vegetables the ordinary length of time may spoil them.

SINCE the early days of Birds Eye's more or less pioneer work, over a hundred companies have entered the quick-freezing field. Five years ago Birds Eye accounted for 80% of all frozen food production; today, in spite of greater competition, it still produces about 50% of the total. Since 1928, when it became a subsidiary of the powerful General Foods Corp., it has had ample capital to back up its technical experience.

In 1934 total sales in the industry were 67% over those of 1929, when frozen fruits and vegetables were first produced on a large scale. In 1935 sales jumped 50%; the same in 1936; and 60% in 1937. In that year total production of frozen foods reached

about 200,000,000 pounds, a figure which leaped to 500,000,000 pounds in 1938. Sales for 1939 again ran about 50% ahead. Not all of this was retail trade, however; a considerable proportion of the total is still taken by hotels, restaurants, &c., which have been using frozen foods for a long time.

As sales have grown the varieties of frozen foods available have grown as well. You can, for instance, cut yourself a glass of orange juice with a knife. You can come in out of Northern snows to refresh yourself with such tropical fruit as mangoes and papaya. At least one company is planning the quick-freezing of game. Land-bound Midwesterners will be able to have deep-sea fish; salty coast-dwellers will be able to get fresh inland fish some day.

For the packaging of frozen poultry a remarkable new kind of wrapper has been developed. The fowl is inserted into an inflated bag made of special latex. Then the bag is deflated to the exact size and shape of its contents.

Meanwhile, however, it is the staple foods that account for mass sales. Frozen vegetables constituted half of all frozen-food sales in 1937, and to this total frozen peas alone contributed one-quarter. The remaining sales were divided almost equally among fruits, meats, fish, and poultry.

After peas, the most popular vegetables, in order, are lima beans, corn, string beans, spinach, broccoli, asparagus, Brussels sprouts, artichokes, beets and cauliflower.

Strawberries account for more than half of the total fruit frozen, followed by various other berries, cherries, apricots, grapes, pineapples, currants, prunes, rhubarb, figs and peaches.

Popular varieties of fish include perch, haddock, mackerel, halibut, salmon, swordfish and codfish. Among other kinds of seafood frozen are oysters, clams, scallops, shrimps, crab and lobster meat.

Frozen meats include a variety of choice cuts, principally of beef and lamb.

The main disadvantage of frozen foods is their cost. Although they are frequently cheaper than the same fresh foods out of season, they do cost more than canned foods or fresh foods in season. But allowance must

be made for the fact that all inedible portions are removed before packaging, which makes frozen foods more economical in many cases than the price per pound would indicate. Also, some people find that the saving in time of preparation compensates for the higher price.

Since frozen food prices remain about the same the year around, it is advisable to keep an eye on the corresponding fresh foods and switch over when they become cheaper. It is advisable, also, to note the net weights on packages of frozen foods, since they are commonly not sold by the pound.

AN IMPORTANT question regarding any method of food processing is its effect on the nutritive value of the food. Some treatments cause partial or complete destruction of essential nutritional elements—especially of vitamin C. Available evidence indicates that quick-frozen foods retain their nutritive value as well as or better than canned foods or foods preserved in other ways. Quick-frozen vegetables have been found to show a higher vitamin C content than many fresh vegetables in the average city market.

For maximum vitamin retention, vegetables should be plunged while still frozen into boiling water. Slow thawing or placing in water below the boiling point may diminish somewhat the content of vitamin C and vitamin B₁, because of more prolonged exposure to air and high temperature. Much of the vitamins also dissolves into the water. Therefore the water in which vegetables are cooked should not be discarded but should be used for sauces or soups. It is not necessary, however, for these precautions to be observed for the other vitamins.

So far the U. S. Dep't of Agriculture has established tentative grade standards for only two frozen foods—peas and lima beans. Application of these standards is purely voluntary, but they are helpful to conscientious companies. It is to be hoped that standards for other frozen foods will rapidly be established by governmental agencies. Unfortunately, appropriations for this work have recently been cut to quite a considerable extent.

A Rayon Is a Rayon

THE *Daily News Record*, a New York trade paper with a sense of humor, has been exploring the popular knowledge of rayon and popular misconceptions among men concerning the nature of the beast. In their first survey, the editors questioned 109 men in various occupations. Only 10 said they knew what rayon was; of that number, six said they'd had something to do with it in their business.

A great many of the men questioned complained that salesclerks had frequently sold them rayon articles, claiming that they were silk. "I don't know where the silk impression originated," one of them said. "But there was some skull-duggery somewhere down the line."

The following week, *The Daily News Record* had more fun. Taking their cue from the complaints about misrepresentation by salesclerks, the editors visited 13 stores, asking to be sold a pair of silk or rayon pajamas. Rayon, they learned from the salesclerks' explanations, is Celanese; wood pulp, mixed with milk; chemicals and silk-worms; domestic silk, grown out West; a mixture of cotton, silk, and a bit of acetate; a synthetic fabric made from corn; &c.

Apparently, even salesclerks who meet the problem every day have no real idea of what rayon is made, or how. And it's simply not as hard as all this to describe it. Rayon is an artificial fiber manufactured from a cellulose base, such as wood pulp or cotton linters. Its principle resemblance to silk is in its appearance. In many ways it is inferior as a fabric both to silk and cotton.

This is the kind of description salesclerks should give, and not—as reported by *The Daily News Record*: "Do you know that rayon adjusts itself according to the weather? It will keep you warm in cool weather and cool in warm weather."

Or: "Rayon is a synthetic fabric made from corn stalks. . . . The main trouble with silk is that it's weighted and when you wash it the weights drop out and it becomes streaky and bare. This doesn't happen to rayon. Corn is very strong."

MEDICAL SECTION

HAROLD AARON, M. D., SPECIAL MEDICAL ADVISER

MEDICAL CONSULTANTS: Dr. Anton J. Carlson—Chairman, Dep't of Physiology, University of Chicago; Past President, American Physiological Society; Dr. Theodor Rosebury—Assistant Professor of Bacteriology, College of Physicians & Surgeons, and School of Dental and Oral Surgery, Columbia University; Dr. Marion B. Sulzberger—Ass't Professor of Clinical Dermatology and Syphilology, New York Post-Graduate Medical School, Columbia University; Editor, *Journal of Investigative Dermatology*.

CU's Medical Consultants give technical advice on matters of medicine which lie within their fields. CU is responsible for all opinions concerning social, economic and public health questions.



The Prodigal Pituitary

A tiny gland exerts far-reaching influence in the body; but products made from it are still in the experimental stage. Second article in a series on "Glands and Glandular Products"

by MORTON S. BISKIND, M.D.

The Lewis Carroll of today would have Alice nibble from a pituitary mushroom in her left hand and a lutein one in her right and presto! she is any height desired.

—HARVEY CUSHING

THE pituitary, or "hypophysis," as it is also known, is a little nubbin attached to the underside of the brain. It rests in a special bony receptacle called the *sella turcica* (literally "Turkish saddle") at the base of the skull. In man this gland (really three glands in one) weighs only about one-fiftieth of an ounce and is not much bigger than a pea; yet it has been credited with producing more different "hormones" than all the other glands of the body put together.

The total number of substances secreted by this little organ is not known. But it is known that—directly or indirectly—it can affect the function of most, if not all, the other endocrine glands, and other organs as well.

Thus the pituitary has been called the "master gland," "general headquarters of the endocrine system," "keystone of the endocrine arch," "leader of the endocrine orchestra"

and what not. Exactly how much influence it exerts, and just who is "master" of the body chemistry, is still a much-argued point. For, while

HIGH POTENCY ADJUSTED

Because of its high content of organic iodine—0.3 per cent, PABA-DECA DEXTROTHYROID has uniformly high therapeutic activity, a feature noted and commended on by clinical investigation.

FOR ORAL THERAPY IN ENDOCRINE DISORDERS WE SUGGEST EMPLITS

These accurate control tablets dissolve early in the stomach, are rapidly absorbed and protected against deterioration by every known colloid. Attractive in appearance and fragrant, disagreeable odor. The granules specified refer to the deionized product.

Emplits are supplied in bottles of 100 and 500.

LIST OF EMPLITS

No. 1. Amino Thyroid	\$1.10
No. 2. Amino Thyroid	1.10
No. 3. Amino Thyroid	1.10
No. 4. Amino Thyroid	1.10
No. 5. Amino Thyroid	1.10
No. 6. Amino Thyroid	1.10
No. 7. Amino Thyroid	1.10
No. 8. Amino Thyroid	1.10
No. 9. Amino Thyroid	1.10
No. 10. Amino Thyroid	1.10
No. 11. Amino Thyroid	1.10
No. 12. Amino Thyroid	1.10
No. 13. Amino Thyroid	1.10
No. 14. Amino Thyroid	1.10
No. 15. Amino Thyroid	1.10
No. 16. Amino Thyroid	1.10
No. 17. Amino Thyroid	1.10
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No. 23. Amino Thyroid	1.10
No. 24. Amino Thyroid	1.10
No. 25. Amino Thyroid	1.10
No. 26. Amino Thyroid	1.10
No. 27. Amino Thyroid	1.10
No. 28. Amino Thyroid	1.10
No. 29. Amino Thyroid	1.10
No. 30. Amino Thyroid	1.10

A FAMOUS DRUG HOUSE

... lists some dried gland products, "Attractive in appearance and free from disagreeable odor." But only the thyroid is potent.

the little nugget in the Turkish saddle does modify the working of many other structures, they in turn can change in number, amount and kind the substances poured into the blood stream by this gland. Furthermore, animals and man can survive for a fairly long period without a pituitary—not in excellent health, to be sure, but alive.

However, if we remove the outer layer of the adrenal glands, above the kidneys, or the parathyroid glands, in the neck, death occurs in a relatively short time. The so-called "master" is thus powerless without at least two of its associates, and is highly responsive to the behavior of the others. Thus the glands of internal secretion form a highly complex, integrated system. Change the function of one and others will be affected.

Probably the pituitary is not nearly so prolific as it has been claimed to be, but it does affect bodily growth, the size and function of the thyroid, adrenals, parathyroids, and sex glands, the secretion of milk, pigment metabolism, sugar and fat metabolism, the function of the kidneys and the tension of the muscles of the intestines, womb, air tubes and blood vessels; and it has other functions as well. Some of these appear to be direct effects, some indirect.

SMALL as the pituitary is, its working units are even smaller. It is made up of three separate and more or less distinct parts—an anterior, intermediate and posterior. Each has functions all its own—from each remarkable extracts can be obtained.

From the posterior part two fractions have been extracted, apparently representing at least two, possibly more, active substances. One of these fractions, when injected under the skin, contracts blood vessels (and under certain conditions raises the blood pressure), increases the activity of the intestine and, depending on the amount and other factors, increases or diminishes the output of urine. The other fraction, when similarly injected, causes contraction of the womb or uterus. This and the simple extract containing a mixture of both fractions are widely used in childbirth; they have contributed greatly to preventing many of its complications.

Posterior pituitary extract has been

known for many years; standards of potency have been set up for it and it is included in the U. S. Pharmacopoeia. Its uses are well known and, by the vast majority of doctors, it is employed with the caution so potent a product merits. When used at the proper time and in the proper amount in childbirth, it is both safe and highly valuable. If it is used too early and in too large a quantity, it may cause such violent contractions of the womb as to lead to its rupture, with possible fatal hemorrhage. This, regrettable to say, has happened—and, though such accidents are less and less common, nevertheless they still do happen.

Some of the drug firms must take a large share of the blame for this fact. About a dozen of them market unscientific mixtures of posterior pituitary extract and an extract of another gland, the thymus, the function of which is unknown. Thymus extracts were long ago shown to have no detectable effect whatever on the action of the pituitary extract. Yet some, at least, of the firms in question have implied in the advertising they so liberally distribute to the doctors that their mixtures are so safe that the usual precautions need not be observed. A number of fatal accidents caused by these products are on record—many others undoubtedly have occurred.

The intermediate portion of the pituitary contains a substance which, in certain species of animals such as the frog and some varieties of fish, causes expansion of pigment-containing cells in the skin, making the surface darker, or changing its color. If the pituitary of a frog is removed, it becomes an albino. The pigment principle is found in the human pituitary as well as in that of animals—equally in that of the white man and the Negro—but what function, if any, it performs in the human body is not known.

It is the anterior lobe that puts the others to shame. For instance, giant rats more than twice normal weight can be produced by injecting the growth principle of the anterior pituitary. Translated into human terms, this would mean a man 10 or 12 feet in height (no *authentic* case of a human giant even nine feet high has ever been reported).

In the absence of stimulation by the pituitary, other glands of the body—among them, the sex glands, the thyroid, the adrenals—diminish in function, get smaller. Extracts have been prepared from the anterior pituitary capable of stimulating growth and activity of these organs and others, too. But it seems fairly certain that *all* the substances that have been obtained do not exist as such in the gland. The chemical treatment to which they are subjected in extraction is responsible for some, at least, of the different effects.

Few of the anterior pituitary extracts, though they can produce such remarkable effects in animals, are as yet either safe or effective for use in human beings, and those that are effective are still experimental. The chemists have not determined the exact nature of the active substances, and won't be able

to make them artificially until they do, if then.

BUT this much we do know: pituitary extracts to be effective must be injected under the skin—pituitary by mouth is of no value. Nevertheless, about half a hundred drug firms market more than 200 products containing dried pituitary for everything from dwarfism and cold feet to sexual underdevelopment and obesity. And they do persuade the doctors to prescribe them and the public to take them (or they wouldn't be selling them). They can cite evidence of amazing results by the ton. Yet they take a little too much credit. Children have been known all at once to start growing and become sexually mature, adults have even been known to lose weight and others to cease having cold feet, without swallowing any pills.

The "Average" American Diet

... and a discussion of its protein and vitamin A content. Second article in a series on "Diet and Nutrition"

THE recent relief crisis in Ohio emphasizes, among other things, what has long been stressed by nutrition investigators: that the diets of great numbers of Americans are deficient in essential nutrients. The energy requirements of the body are the easiest to satisfy because all foods, and particularly the cheap starches, cereals and fats, yield calories even if they don't all yield such other essentials as proteins, vitamins and minerals. And even so, recent surveys^{1,2} of the eating habits of the American people show that about 40% of the diets of low-income families (under \$20 to \$25 a week) furnish less than the 3,000 calories considered as the average daily energy requirement for each person.

The chances of obtaining a good diet are chiefly dependent upon in-

come. But lack of information is also responsible for the low nutritional value of many diets. CU has already pointed out³ that the excessive consumption of sugar, sweets and refined foods has tended to reduce the intake of protective foods rich in vitamins, minerals and proteins.

Proteins enter into the composition of every living cell and are indispensable for growth and good health. The survey by Stiebeling and Phipard showed that there is little likelihood of a serious deficiency in the quantity of proteins in diets of families whose income is over \$25 a week. But quality as well as quantity must be considered in judging protein in diets.

The proteins present in meats, fish, fowl, milk, cheese and eggs supply all the amino-acids that are indispensable for growth and good nutrition. These are therefore known as complete proteins. The proteins present in vegetables are not only deficient in quantity but they also do not furnish all the essential amino-acids. An exclusively

¹ Dorothy G. Wiehl, "Diets of Low-Income Families Surveyed in 1933." Health & Depression Studies No. 3. Public Health Reports 51: 77-97, 1936.

² Hazel K. Stiebeling and Esther F. Phipard, "Diets of Families of Employed Wage Earners and Clerical Workers in Cities." U. S. Dep't of Agriculture, Circular No. 507. January 1939. 15c.

³ CU Reports, December 1939.

vegetarian diet, therefore, will not provide the body with the high-quality proteins necessary for good health. Vegetables are valuable, however, as sources of vitamins and minerals and for some people they also provide bulk for proper bowel evacuation.

The average person will obtain enough protein of good quality if his day's diet contains about $\frac{1}{4}$ lb. of either meat, fish or fowl, a pint of milk and one egg. If milk causes indigestion (such instances are relatively few) a large helping of cheese may be substituted or more meat or eggs should be added to the diet.

MORE frequent than deficiency in proteins in the average diet is a deficiency in vitamins. Briefly, vitamins may be defined as organic substances indispensable for growth and well-being. Many of them have been isolated, identified chemically and synthesized. Vitamins have been worked into tablets, capsules, drops, liquids, emulsions and even vanishing creams. Consumers pay about 30 million dollars a year for vitamin preparations. They should know what they are getting for their money.

Vitamin A was discussed at some length in the February 1938 issue of *CU Reports*. The prime point to be made about it is that it is essential for normal nutrition at all ages. One of the first symptoms of vitamin A deficiency is poor visual adaptation to dim light or semi-darkness ("night-blindness" or "hemeralopia"). Severe shortages are characterized by a disease of the eye ("xerophthalmia"), loss of weight and a widespread weakening of tissues, especially epithelial tissues.

The exact requirements for vitamin A are not known, but most authorities agree that from 4 to 6 thousand International Units daily are adequate for the adult. During growth, pregnancy and nursing the requirements are higher, probably 8 to 10 thousand Units.

Vitamin A is present in eggs, liver, dairy products (butter, milk and cream) and above all in fish-liver oils. Green and yellow vegetables provide carotene which is converted in the body into vitamin A. The deeper the green or yellow color of the vegetable, the higher the content of carotene.

Frozen vegetables lose little or none of their carotene content. And cooking

or heating destroys very little of the vitamin or the carotene, so that no special precautions for retaining it need be observed in preparing foods for the table.

The survey of Stiebeling and Philipard showed that the diets of only about one-fifth of all the families studied furnished a liberal allowance of the vitamin. Milk, butter, eggs and liver are expensive sources of the vitamin, but many families which are not receiving an adequate supply of it could do so by eating more yellow and green vegetables. An adequate intake of the vitamin for an adult would be provided by a pint of whole milk, one egg, a half ounce of butter and a large serving of a green or yellow vegetable daily. Children will obtain the greater amount of vitamin A they require from an additional one to two glasses of milk and a teaspoonful of cod-liver oil.

It is obvious that the average person can obtain an adequate amount of vitamin A without recourse to vitamin preparations. If he will keep in mind that dairy products, liver, eggs and yellow and green vegetables are

rich in this as well as other vitamins, he can resist the blandishments of vitamin advertising.

An excess intake of vitamin A by the use of vitamin supplements will *not* increase resistance to infection. The history of experiments in prevention and treatment of colds, gripes and other acute infections proves that if the diet is adequate in the vitamin, an excess, no matter how great, will not prevent or reduce either the frequency or severity of the condition.

In certain states of ill health, or when the digestive tract is unable to tolerate foods rich in vitamin A, or when there is impaired absorption from the digestive tract, or when a person is on a diet considerably restricted because of disease, a vitamin A supplement may be necessary. For the great majority of people, however, an adequate amount of vitamin A is easily obtainable. In fact, of all the known vitamins it is perhaps the most accessible and purchasable, and one, also, which there is little justification for including in the various shot-gun mixtures advertised so prolifically to the public.

Sales vs. Science

The Knox Co. has discovered that gelatin is good for women, too. Proof? It's on file with Good Housekeeping

TAKING a leaf from the advertising pamphlets of the drug houses, the Knox Gelatine Co. is presenting, in a new series of advertisements, clinical data—experiments and tests—which "prove that Knox Gelatine reduces fatigue in women, too." The validity of these tests was so clear that the Knox Co. felt impelled to file the data in that austere repository of contemporary scientific proceedings—*Good Housekeeping*.

CU is singularly unimpressed by the new array of "clinical" data marshalled in the pages of *Good Housekeeping*. "File Proof No. 16 (proof on file with *Good Housekeeping*)" says—"35 agree: 'less tired'." "File Proof No. 194" says—"Routs 'Mid-Afternoon Slump'."

Scientific authority, however, does

not agree. In an article in the *Reports* for June 1939, CU cited considerable evidence to show that gelatin does not relieve the fatigue of normal people—*either men or women*.

Until recently Knox's gelatin advertising was based upon the poorly controlled experiments (to which Knox contributed) conducted by Drs. Roy, Johnson and Taylor of New York. These experiments were discussed in the earlier CU report. Unfortunately for gelatin manufacturers, the doctors reported that "no appreciable effect was noticed" in the case of the four women who were subjects of the experiment, so the advertising was forced to emphasize the value of gelatin for men. Some 50% of the population was too much to ignore, Knox

WOMEN, TOO... Recent scientific experiments and test cases prove the Knox Gelatine reduces fatigue in women, too.

FILE PROOF NO. 12*



35 AGREE: "LESS TIRED"

These 35 test-cases of hard-working women checked weekly for six weeks. Majority felt less afternoon fatigue, were more rested after sleep. Younger ones had definitely more energy for sports and dancing. Several went through periods of strenuous housecleaning, family sickness—found improved staying power. All reported beneficial results. All agreed they felt less tired.

FILE PROOF NO. 191*

ROUTS "MID-AFTERNOON SLUMP"

This case observed over six weeks test period. Neurologist, ex-scientist, sleep in afternoon, exhausted at end of business day. After two weeks of Knox Gelatine feeding, began to wake fresh in the morning. "Mid-afternoon slump" gradually disappeared. Now feels lively and ready for play after work. Her experience confirmed by many other business women who report greatly increased energy.



DO YOU LACK "RESERVE ENERGY"?

Does your staying power leave you around 3 P.M.? A solution to this problem is the simple, inexpensive Knox Gelatine feeding. Knox is not a stimulant but a food. It supplies certain elements which fight fatigue. Taken regularly, it often enables men and women to increase energy output over 100 per cent. Amazing cases of increased endurance are on file. That it works has been proven by scientific tests.



*Based on file with Good Housekeeping

Fight Fatigue with KNOX GELATINE



THIS WAY: Empty 1 envelope of Knox Gelatine in glass 8, full of cold water or fruit juice, or 1/2 water 1/2 fruit juice. Let liquid absorb gelatine. Stir briskly, drink rapidly (it is still thick). Most people take 1 envelope a day for 2 weeks, then continue with 2 a day. There is no harm in taking more.

CAUTION: There are many different gelatins, also gelatin desserts. The latter contain only about 10% gelatin, and 90% sugar. Be sure to use Knox Gelatine. Only Knox is proved to have the elements for energy building. Write for free Literature Booklet from Knox Gelatine Co., Johnston, R. I., Dept. 884.

THREE DOCTORS AGREED:

"... no appreciable effect was noticed"

apparently felt; at any rate, the new advertising campaign makes its appeal to the female trade. Its scientific basis? "On file with Good Housekeeping."

Dr. Wilder of the Mayo Clinic, a leading investigator of food and metabolism, wrote to CU in June that his experiments with glycine "were not such as to encourage belief that glycine appreciably affects the feeling of well-being of normal, healthy men or women of this age group, or significantly delays or mitigates the normal sense of fatigue." Since then no new investigations that would justify a reversal of this judgment have been reported in any medical journal known to CU.

Only time and profits will tell what new "proofs" and how many more than 35 women the company will cite to relieve the fatigue of the American people, and, incidentally, to sell them more boxes of Knox.

January, 1940

Nutrition and Physical Degeneration*

Dr. Weston Price's new book is reviewed and found lacking

THIS book is an account of the author's experiences among primitive and aboriginal peoples and other isolated groups who are known to be remarkably free from decay of the teeth. Here Dr. Price expounds, for popular consumption, his belief that tooth decay is one of the so-called "degenerative diseases" which are believed collectively to result from the "artificial" life—or at least from the "artificial" diet—of civilized man. Dr. Price believes, in a word, that primitive man lives and eats more wisely than we do, that "primitive wisdom" gives him a sounder body and, in particular, sounder teeth.

The critical reader is likely to leave the book with this idea no better established in his mind than it was to begin with. He may notice that Chapter 2, entitled "The Progressive Decline of Modern Civilization," which purports to lay the basis for the concept of physical degeneration, is actually little more than citations of opinions favorable to Dr. Price's belief. No real evidence for a progressive decline is presented.

The gloomy idea that civilization carries with it, as a sort of penalty, a broad group of diseases centering about arteriosclerosis and including, according to different writers, conditions as diverse as tooth decay, mental delinquency and cancer, is often expressed but has never been scientifically accredited. These diseases can be classed together only on the basis that their causes are obscure; they are a miscellany of the unexplained, with little or nothing else in common.

The idea of physical degeneration is as difficult to refute as to establish because of its very breadth and vagueness. It is true that some of the so-called "degenerative" diseases are uncommon among primitives, but it is

likely that the underlying reason is different in each instance. The rarity of diseases of old age among the Eskimos, for example, may be due simply to the fact that they seldom live long enough to acquire them, perhaps because of the hardships and privations of their customary life.

A thoroughgoing study of disease as a feature of "racial deterioration" has never been made. Because of the absence of adequate statistics, it would be difficult, indeed, to demonstrate that such a disease as tooth decay has actually increased during historical times. From the statistical point of view the question is further complicated by progressive improvement in the detection of disease, and, with reference especially to diseases of old age, by increased longevity and advancing average age of the general population.

Dr. Price's statements on tooth decay itself, either in this book or in his many reports in professional journals, throw no satisfactory light on the reasons for the admitted dental superiority of primitive to civilized man. In neither place can one find the reasoned analysis of objective data which alone provides an acceptable basis for scientific conclusions.

Dr. Price's views may be contrasted with the following which is the concluding statement of a painstaking study of Eskimos reported quite recently by another group of workers:

The data in this paper also suggest that there is no basis for the view frequently held that the freedom from dental caries enjoyed by a primitive people is due to a nutritional superiority of "natural" as compared with "civilized" diets.¹

Dr. Price's book as a whole is not a credit to the Scientific Book of the Month Club, whose blessing it carries on its jacket; nor is its preface by Professor Earnest A. Hooton likely to reflect great glory on the Harvard anthropologist.

¹ *Journal of Dental Research*, vol. 18, p. 244, 1939.

* "Nutrition and Physical Degeneration: A Comparison of Primitive and Modern Diets and Their Effects." By Weston A. Price, M.S., D.D.S.; foreword by Earnest A. Hooton, 421 pages, illustrated with 134 figures. Paul B. Hoeber, New York. 1939. \$5.

GENERAL SECTION

CONSUMER NEWS AND INFORMATION



"Report" by Mr. Matthews

ON December 11, Congressman Martin Dies released to newspapers a curious "report" on the American consumer movement, prepared by J. B. Matthews, his chief investigator and "research" director, who until recently was vice-president of Consumers Research, Inc., of Washington, New Jersey.

So completely was this "report" the work of one individual (Mr. Matthews) and so strange were the circumstances surrounding its preparation and filing, that not even strong supporters of the Dies Committee's activities could condone it. Criticized with unusual severity by many newspapers and public figures (see page 25), it seemed to a *New York Times* writer that it might be "... merely an effort, as some surmise, to obtain additional funds for the committee."

One motivation of Mr. Matthews' work, we believe, goes back to four years ago, when a \$13 minimum wage, insecurity of employment and the firing of union officials led to a strike of Consumers Research employees. During that strike it was J. B. Matthews who acted as chief strike-breaker and aired threats of revenge against the strikers. That was the strike which, after the failure of Consumers Research to accept arbitration or to abide by the decision of the National Labor Relations Board in favor of the strikers, led to the formation of Consumers Union. And as Consumers Union grew larger—soon passing Consumers Research—Mr. Matthews' animus grew stronger.

His bitter attack on Consumers Union in his "report" of last month would seem to be a flowering of that animus. But it is more than that, too. For now there are apparently even

more important jobs to be done. The nature of them must have dawned on every member of every bona fide consumer organization when Matthews went out of his way to enter a defense of advertisers and, in particular, of Hearst's *Good Housekeeping* magazine, now being proceeded against by the Federal Trade Commission (see p. 26).

Two important developments throwing sharp light on this phase of Mr. Matthews' report, and on the underlying significance of the whole report, have become known since its publication.

The first is that *copies of the entire report were distributed to advertisers by Good Housekeeping magazine before it was even received by many newspapers.*

The second development can best be related through the words of Drew Pearson and Robert Allen, famed Washington columnists, who reported

it in a radio broadcast and in their widely syndicated column, *Washington Merry-Go-Round*. Pearson and Allen told of a remarkable dinner attended by Matthews. "The dinner," they wrote, "was given at the home of George Sokolsky, who once was paid \$6,000 by the National Ass'n of Manufacturers as ghost writer and pamphleteer"

"Present at the Sokolsky dinner was Robert Lund of St. Louis, former president of the Manufacturers' Ass'n and head of the Lambert Pharmacal Co. [*Listerine*], together with several other big manufacturers of household and consumer goods. . . ."

"Another guest at the Sokolsky dinner was F. J. Schlink. It so happens that Schlink is Matthews' partner in conducting Consumers Research. [Mr. Matthews disavows any connection with Consumers Research now; his wife is employed by the organization in an editorial capacity.] This organization was NOT attacked by the Dies Committee.

"Consumers Research publishes *Consumers Digest*, of which Matthews has been vice-president and managing editor. Consumers Research is the direct competitor of Consumers Union, to which Matthews pinned the tag of Communism."

In light of these disclosures—little short of breath-taking in their implications—there is added interest in the mysterious circumstances surrounding the presentation of the Matthews report. Martin Dies by his own statement appointed himself a "subcommittee" of one and this "subcommittee" met at an unnamed place at 6 o'clock on a Sunday evening to hold a "hearing" at which no committee member was present but Mr. Dies and only Mr. Matthews performed. When Mr. Matthews was sworn in, according to the published transcript, he did not swear to anything except that he had "completed" his report. He did not swear, and was not asked to swear, that anything in the report was true.

Even the daily press, friendly as it is to advertisers and antagonistic as it is to the consumer movement, editorially expressed its amazement that not one of the groups or individuals attacked had been notified that there was going to be a hearing; that not one had been given a chance to testify; that not one had even been told that a report was going to be released. So



"YOU ARE DANGEROUS AGENTS OF MOSCOW"

REPRINTED FROM NEW YORK POST
BY PERMISSION OF ROLLIN KIRBY

The Case Against Good Housekeeping

More than any other single case, this will determine what protection the Wheeler-Lea Act will afford consumers

THE Federal Trade Commission has completed, insofar as direct testimony is concerned, its case against *Good Housekeeping*. The charge (see September Reports) was that the magazine was guilty of "misleading and deceptive acts and practices" in the issuance of its Guarantys and Seals of Approval and in the publication of grossly exaggerated and false claims for products advertised in its pages. Arguments of the defense will probably not start before February.

Hearings have been held in New York, Chicago and Washington and approximately 1,000 exhibits were introduced during the Commission's presentation of its case. Everything from candy to washing machines—and the advertising thereof—has been dealt with in the testimony; it runs to more than 2,000 pages. And, since many of the products considered were nationally advertised, the daily press has considered the trial so unnewsworthy as to ignore it almost completely.

One of the most startling bits of testimony came during the last days of the hearing when Miss Margaret Dana, textile expert associated with the *Atlantic Monthly*, was on the stand. For during her cross-examination it was revealed that she had lodged a complaint with the Commission about the *Good Housekeeping* system of seals and advertising guarantees. Her testimony must have chagrined *Good Housekeeping's* Mr. Richard E. Berlin (Executive Vice-President of Hearst Magazines, Inc.), who has maintained all along that subversive consumer groups were solely responsible for the stew in which *Good Housekeeping* finds itself.

Equally chagrined by Miss Dana's testimony must have been Mr. Warren Agry, *Good Housekeeping's* general manager, who, she said, had admitted in an interview with her that certain advertisements of fabrics contained in *Good Housekeeping* were misleading. Despite urging by *Good Housekeeping's* attorney, Miss Dana could not remember Mr. Agry's offering to remove the cause for her complaint.

The testimony of the experts presented by the Commission would, no doubt, prove disillusioning to faithful *Good Housekeeping* readers. Advertising claims to the contrary—even when they appear in *Good Housekeeping*—cosmetics will not revitalize the skin or cure pimples nor will yeast clear the complexion. So agreed three prominent dermatologists—Dr. Eugene F. Traub, Dr. Herman Sharlit and Dr. Marion Sulzberger—who testified at the hearing in New York.

Dental experts dealt harshly with the claims made for some of the dentifrices advertised in *Good Housekeeping*, including Iodent, Dr. Lyon's, For-

han's, Calox and Fasteeth. In Chicago a number of physicians went on the stand to say that a number of widely advertised drugs are not what the ads would have the public believe.

In Washington, Dr. Leslie Smith of the U. S. Public Health Service testified that *Lavoptik*, *Murine*, and *Eye-Gene*, all eyewashes bearing the approval of Good Housekeeping Institute, were not used by physicians in reducing eye irritation and would not cure such irritation.

Testimony regarding food products had its unsavory moments. An inspector of the Food & Drug Administration testified that he had seen rodent excreta on the starch molds of the Candy Corp. of America—the products of which have the right to bear *Good Housekeeping's* Seal of Approval. And there was the by now notorious occasion when a Polish ham had the bad grace to explode in court (see December Reports.)

That a *Good Housekeeping* Seal does not always assure satisfactory performance from an electrical appliance was brought out by Dr. Philip O. Grabelle, who told of his experience with two *Whirldry* washing machines which he was forced to return because they broke down. He was followed on the stand by Miss Elizabeth Moehler of the appliance department of L. Bamberger & Co., the firm from which the machines were purchased. Her store, said Miss Moehler, had had repeated difficulty with machines of this make because they developed mechanical defects.

Illuminating testimony came from industry witnesses as to the amount of inspection given by *Good Housekeeping* to firms entitled to use the famed Seal. As a case in point, Mr. Henry Fowler, President of the Royal Crown Bottling Co. of Washington, which uses the *Good Housekeeping* Seal on its bottles of *R.C. Cola*, testified that to his knowledge no inspection of his plant had ever been made by a representative of *Good Housekeeping*. Similar testimony was given by Walter F. Brauns, general manager of a laundry using the Seal on the laundry lists it issues, in newspaper advertisements and on wagon signs.

Good Housekeeping makes a point of the fact that any manufacturer can have his products tested free by its Institute or Bureau whether he adver-

"Certainly I'll have my Rugs Cleaned if the finest cleaning costs so little!"

OF COURSE you don't want your rugs and carpets to remain dirty, unattractive, unhygienic. But what'll it cost to clean them? Will they be safe? You can't leave the cook, his baby, his dog, and his cat, and trudge through a lot of cleaning plants to find out. You don't know whether Messrs. X will use harmful chemicals on your rugs or dry them so fast that the fibers break down. But WE know! That's just what the Certified Rug Cleaners Institute has straightened out. Below we list cleaners whose equipment, methods and insurance conform to Institute standards. Their work is guaranteed by *Good Housekeeping* as advertised therein. They come out often and embedded fibre-harshing grit. They clean rugs the proper way—which is with mild soap and soft water, just like your fine linens and baby's woolens. They dry your rugs with gently circulating warm air. They'll clean rugs of all sizes, and wall-to-wall carpetings, too—beautifully, for an amazingly modest fee... only a few cents a square foot for Domestic and slightly more for Orientals. And, remember, your complete satisfaction with their workmanship is guaranteed by *Good Housekeeping*.

Why not phone your local Certified rug-cleaner now?

MEMBERS OF THE CERTIFIED RUG CLEANERS INSTITUTE

Adams—Adams Carpet Cleaning and Repair Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co.	Adams—Adams Carpet Cleaning and Repair Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co.	Adams—Adams Carpet Cleaning and Repair Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co. Baltimore—Baltimore Carpet Cleaning Co.
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100 EAST 10TH ST. NEW YORK CITY

THE EVIDENCE INDICATES

... that rug cleaners must do their share

Waterman Products

IN December 1938, CU reported: "All Waterman products . . . are 100% union made by the Waterman Fountain Pen Unit, Local 134, of the United Rubber Workers of America, CIO." Waterman products are no longer union made, according to a United Rubber Workers of America release. When a change in management abrogated the union agreement, the company's workers went on strike (August 5, 1939), charging that the company refused to bargain with the union and that it fired union leaders. The strike was called off, according to the union, "because of the protection accorded that company by the Newark Police Dep't, the refusal of the State of New Jersey to pay unemployment insurance to the strikers, and the refusal of relief." The products of the Waterman Co. are therefore still included on the unfair list by the union, which announces that it will await the results of the NLRB discrimination case against the company.

tises in the magazine or not. That may be quite true. Nevertheless, the evidence would seem to indicate that when a dry cleaner, laundry owner or rug cleaner joins one of the institutes whose members are granted the use of the Seal, he perforce must do his share to pay for advertising in the magazine.

One former member of the Certified Rug Cleaners' Institute testified that in 1935 his firm paid about \$450, or 1% of its gross, as its share of the Institute appropriation for advertising in *Good Housekeeping*. Dues to the Institute amounted to an additional \$250 a year. Another witness testified that of the \$100 a month his company pays to the Institute for Maintaining Dry Cleaning Standards, approximately \$80 goes for advertising in *Good Housekeeping* and one other magazine.

SUCH are a few of the highlights presented at the hearings. *Good Housekeeping's* defense will, no doubt, be lengthy and since the Commission may ask to present rebuttal testimony, the case probably will not be closed for at least several months. If it is followed by a cease and desist order, there seems to be no question but that *Good Housekeeping* will fight it through the courts. More than any other one case, this one will determine how much protection against false and misleading advertising consumers are likely to receive under the Wheeler-Lea Act.

January, 1940

Labor and the Shirt Industry

A supplement to the technical report on page 5

"THE textile industry," Mary Heaton Vorse observes in "Labor's New Millions," "is one of the most confused and competition-ridden industries in the country. No other has such fascist king-doms, such company-controlled towns. It is an industry of low wages and child labor. . . ." Because of the conditions described by Miss Vorse, the manufacture of men's shirts (and other men's cotton clothing) has been a concentration point of the organizational work of the Amalgamated Clothing Workers since 1933. Concurrently, the same industry has received the attention of the United Garment Workers, smaller though older AFL union.

Available results of the ACW's drive in this industry have been reported thus in the *CIO News*: "In a short time, and under adverse conditions [the ACW] succeeded in organizing at least 65% of the shirt industry. It shortened the hours of work, increased wages and improved working conditions to a remarkable extent." Women workers, it is important to note, were the principal beneficiaries of these improvements—of the 35,000 shirt workers the ACW has organized, some 30,000 are women.

Following is a summary of organizational results in the companies whose products are rated in this issue.

Arrow (Cluett-Peabody Co., NYC). Though the ACW has members working for this company, it informs CU that it has no agreement and the company is non-union.

CD (Cooperative Distributors, NYC). These shirts are obtained from the Brewster Shirt Co., an Amalgamated shop.

Eagle (Jacob Miller Sons Co., Philadelphia). Under contract to ACW.

Jayson Whitehall (F. Jacobson & Sons, NYC). Under contract to the ACW which reports that this company along with Jacob Miller (above) and TruVal (below) "are paying the best wages and maintaining the best conditions in the industry."

Long Wear (New Process Co., Warren, Pa.). Non-union. The ACW reports "very low wages."

Loomcraft and TruVal (TruVal Manufacturers, NYC). Under contract to the ACW. See remarks for F. Jacobson & Sons, Inc. (above).

Manhattan (Manhattan Shirt Co., NYC). Non-union. Gladys Dickason, Director of Research for the ACW, writes: "Within the past two years they have opened a factory in the South in which lower wages are paid than were paid in the older factories."

Needles Fruit of the Loom (Eclipse Needles, Philadelphia). Non-union.

Real Silk¹ (Real Silk Hosiery Mills, Indianapolis). The ACW reports that this company does not manufacture its own shirts. For some years, it obtained its shirts from Wilson Bros. (below), a union house. Since Real Silk did not answer CU's request for labor information, it is not known whether Wilson Bros. remains the source of supply for this brand.

Towncraft¹ (J. C. Penney stores). The ACW writes that "the bulk of this firm's work is obtained from an Amalgamated concern which pays very good wages as compared with the shirt industry in general," and the UGW states that the "Pay Day brand sold by this company . . . [is] made in union factories."

Wilson (Wilson Bros., Chicago). Under contract to the ACW.

Wings (Piedmont Shirt Co., Greenville, S. C.). The company writes that "we do enjoy a fine spirit of cooperation from our employees and have always met their individual demands to their entire satisfaction." Speaking for the workers, the ACW reports that this company is "viciously anti-union." The company claims to pay an average wage of \$17 weekly. Last June the NLRB ordered the company to disassociate its two (one white, one Negro) company unions.

¹ Labor ratings of this and all other distributors' brands listed in this report must be qualified by the observation that distributors can and frequently do obtain their branded products from such varied sources—both union and non-union—that it is impossible to state definitely the labor conditions under which they are manufactured.

Getting Your Money's Worth

UNSCRUPULOUS dealers, instead of repairing defects in a used car, will try to conceal them from the prospective buyer. Surface scars can be hammered out—but the damage done to the chassis will remain untouched. Grinds can be choked—sawdust does the trick. Grinding gears muffled—with a blob of grease.

Old tires can be retreaded—and another layer of safety removed. Speedometers can be “fixed.”

Every minute, 24 hours a day, another used car lands on the junk heap. But the consumer has a better chance of avoiding that if he makes certain elementary tests when shopping for a used car. . . .

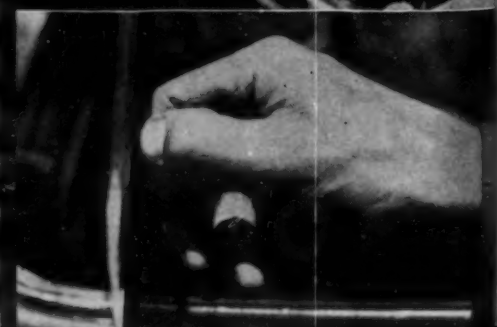
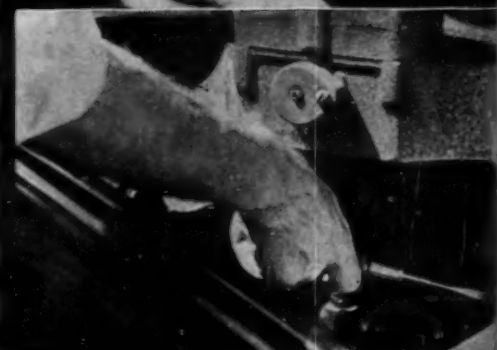
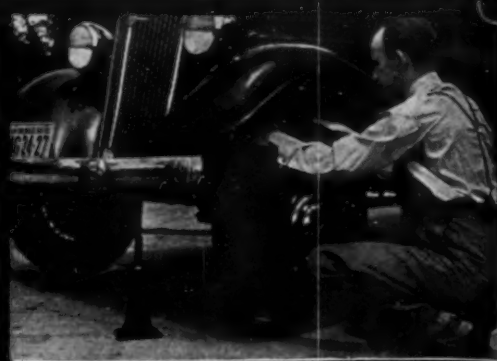
Examine the tires. If they're worn badly on one side, the wheels may be out of alignment. Move the steering wheel back and forth. . . . If the play exceeds $2\frac{1}{2}$ inches, the steering gear or connections are too loose for safety.

Look at the upholstery. It's generally a pretty good sign of the kind of treatment a car has had. Test the oil; if it is heavy, it has been put in to deaden the rattle of loose parts. Remove some of the grease to see whether the engine block is cracked. Make sure the car contains safety glass—a groove along the side tells.

The most important things are the frame and the motor—not the chrome-plated mirror. Remember—**GET YOUR MONEY'S WORTH!**

THE copy and pictures on this page are taken from a movie short made by Lenauer Films, with the aid of Consumers Union. This film is the third in a series, released by Lenauer under the general title “Getting Your Money's Worth.” The first of the series dealt with shoes, lead in children's toys, and Grade A and Grade B milk. The second showed results of tests on razor blades and face creams.

Prints of all of these films, either with sound or silent, are available to organizations, clubs or individuals from Lenauer Films, 202 West 58 Street, New York City. Lenauer advises CU that rental costs are \$2.50 or \$3 a day for 16mm prints (depending on whether one or three films are rented) and \$7.50 or \$10 a day for 35mm prints. Prints in 16mm may be bought for \$27, less a discount of 15%.



War & Prices

Fifth of CU's special reports on the effects of war on prices & products

THE most encouraging aspect of retail prices is that the costs of staple foods continue to decline. But they still stand from 4% to 6% higher than in the middle of August.

In the clothing field, contrary to previous announcements in business circles, reports are that Spring coat and suit lines will be maintained at their established price ranges, although quality will undoubtedly suffer in some cases as the result.

In contrast, retail prices for some types of clothing are being inched up, especially in the low-priced brackets.

Thom McAn shoes, for example, have been increased 15¢ a pair and advances by other chain stores handling men's shoes are expected soon. Woolworth has followed the example of the manufacturers of high-priced silk stockings and upped two of its brands long sold at an established price; other variety chains have also made increases.

For several reasons, consumers will be unwise if they allow themselves to be lulled into a feeling of false security insofar as prices are concerned. To mention one, the cost of raw materials continues to fluctuate. Wheat and cotton, for example, recently reached a new high for the past two-year period. Rayon yarn has also been boosted.

And predictions which come from various sources give food for thought. Isador Lubin, Commissioner of Labor Statistics, testified before the Temporary National Economic Committee at the opening of its hearing on prices

that there was no assurance that the commodity cost increases which have already begun would not continue and include a wider group of materials.

The Committee itself has announced that although the skyrocketing of prices which occurred just after the outbreak of the war (due largely to speculation) has come to a halt, later evidence indicates that prices are entering a second upward phase. And business advisers, such as *Babson's Reports*, predict higher commodity prices by the end of the first three months of 1940 or even earlier.

One event in the merchandising field supports CU's advice, given in the November *Reports*, that consumers should complain about price rises to retailers who are in a position to put pressure on manufacturers and wholesalers. At the New York trade shows held by shoe manufacturers recently, retailers put up so much resistance to higher prices that some manufacturers cut their proposed increases in half and a few abandoned the contemplated advances entirely.

Consumers should also, whenever possible, refuse to buy commodities which have risen sharply, or at least keep their purchases to a minimum. Sales of women's silk hosiery, one of the first products to rise markedly at retail after the outbreak of the war, have dropped. And merchandisers in other commodity fields, according to the *New York Times*, are pondering that fact.

As a case in point, furniture manufacturers, who had planned to advance quotations on Spring goods about 10%, are considering holding prices at the Fall level or limiting increases to 5%.

Spring prices for many products have not as yet been set with certainty. Manufacturers and wholesalers want to put them as high as the traffic will bear, but at the same time they realize that decreased consumption doesn't spell profits.

If within the couple of months just ahead, products which have been boosted sharply don't move off the shelves, manufacturers may pause to think twice about consumer reaction to higher prices.

Bulletin on Trends

THE War Prices Committee of the Consumers National Federation, mentioned several times in CU's War & Prices reports as being active in keeping a check on price increases, has issued its first bulletin on the trend of selected commodity prices and expressed the hope that it will be able to issue similar reports regularly in the future. The first bulletin covers price movements in foods (including flour, pink salmon, and sugar), cotton, silk, rubber, cars, leather, &c. Copies of the report are available from the Federation at 110 Morningside Drive, NYC.

CONSUMERS UNION

17 Union Square W., N. Y. C.

For the enclosed \$....., please enter Gift Memberships for the following. Unless otherwise instructed, begin each with the January, 1940, issue. I understand that the 1939 *Buying Guide* will be delivered at the same time, and the 1940 *Buying Guide* when issued.

*RATES AND SPECIAL OFFERS ARE LISTED ON PAGE 31 UNDER "RATES & SCORING."

Indicate Rate Here Check Below for Binder (at 75c each)

Name.....

☐ Address.....

Name.....

☐ Address.....

Name.....

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☐ Please enter the above Gift Memberships to my Premium score, sending me the following as my Premium Prize:.....

YOUR NAME.....

YOUR ADDRESS.....

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CONSUMERS UNION

17 Union Square W., N. Y. C.

For the enclosed \$....., please send me the following (available only to members of Consumers Union at the prices quoted; if you are not a member, see membership application blank on page 4):

☐ "Wines and Liquors"—1940 Edition (50c)

☐ "Our Common Ailment," by Harold Aaron, M.D. (CU Edition, \$1.00 postpaid)

☐ "Good Health and Bad Medicine," by Harold Aaron, M.D. (CU Edition, \$1.50 postpaid)

☐ "False Security," by Bernard J. Reis (CU Edition; \$1.40 postpaid)

☐ "Millions on Wheels," by D. H. Palmer and Laurence Crooks (CU Edition, \$1.25 postpaid)

☐ CU Reports Binder (75c)

BOUND VOLUMES OF CU REPORTS

☐ Volumes 1 & 2—1936-37 (\$2.50)

☐ Volume 3—1938 (\$2.50)

☐ Volume 4—1939 (\$3)

(See page 31 for descriptions and details of this material)

NAME.....

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☐ Address

☐ Please enter the above Gift Memberships to my Premium score, sending me the following as my Premium Prize:.....

YOUR NAME

YOUR ADDRESS

ICUO

There Ought to be a Law ...

by RACHEL LYNN PALMER

F&DA Appropriations

THE appropriation for the Food & Drug Administration for the coming year will soon be under consideration by the House Appropriations Subcommittee. And the outcome of its considerations is of paramount concern to consumers.

Last year the Bureau of the Budget authorized, and President Roosevelt approved, an appropriation of \$2,500,000 for the Food & Drug Administration. House and Senate conferees lopped more than \$200,000 off this amount. Proper protection of the consumer's interest demands that this year there should be no such slashing and that the appropriation exceed by a substantial amount the \$2,500,000 authorized by the Bureau of the Budget in 1939. Dr. Leland J. Gordon, noted economist, estimates that the Administration needs an annual appropriation of \$20,000,000 to enforce effectively the new law.

Beginning with January 1940, the Food & Drug Administration will begin the task of enforcing important new provisions which, thanks to Mr. Lea's amendment, have up to this time been inoperative. For the first time, it will have the power to proceed against preparations containing narcotic drugs, other than those named in the old 1906 Act, if their labels fail to bear the statement, "Warning—May be Habit Forming." For the first time, it can take action against drugs whose labels fail to give warnings against use by children if their health might be imperiled thereby.

For the first time, the Administration can proceed against a host of proprietary foods, the composition of which has for so long been kept secret from the public, if their labels don't tell from what they are made. For the first time, it can require foods meant for special dietary uses to be labeled with information concerning their vitamin, mineral and other nutritional properties so that the consumer will be able to judge their value.

If consumers could appear at the hearings held by the House Approp-

priations Subcommittee, they might well convince the committee that money cannot be more wisely spent than for the safeguarding of the consumer's health and pocketbook. But the hearings are held in executive session and are not open to the public.

Congressmen may, however, attend the hearings. We therefore urge CU members, as the most effective course of action, to write their Congressmen asking them forcefully to make known to the House Appropriations Subcommittee—of which Rep. Clarence Cannon of Missouri is chairman—that their constituents desire the appropriation of the Food & Drug Administration for the coming year to be substantially increased.

Milk Monopoly

THE right of the Dep't of Justice to scrutinize the big milk distributors' practice of gouging the consumer and squeezing the farmer was upheld recently when the Supreme Court unanimously overthrew the decision of a Federal District Court dismissing the antitrust indictment brought against the Borden Co. and other leading milk distributors. The indictment charged, it will be recalled, that Borden's and the other defendants involved had conspired to fix prices and control the supply of milk in the Chicago area.

The indictment was dismissed by the District Court on the grounds that the Agricultural Marketing Agreement Act of 1937 vested exclusive power to regulate the milk industry in the Secretary of Agriculture, and that therefore the marketing of milk did not come within the province of the Sherman Antitrust Act. Fortunately for consumers, the Supreme Court has now ruled that when Congress enacted the Agricultural Marketing Agreement Act it had no intention of thereby conferring immunity from the anti-monopoly laws upon the distributors of agricultural commodities.

The Supreme Court's action has nothing to do with the defendants' guilt or innocence. The Dep't of Justice has announced that they will now be arraigned and tried soon.

MEMBERSHIP PREMIUM OFFER

Ends January 25, 1940

PREMIUM OFFERS

6 PREMIUM POINTS

1940 edition of CU's Special Report on "Wines and Liquors," or

"Life Insurance: Investing in Disaster," by Mort and E. A. Gilbert (Modern Age; 75c)

"America's House of Lords; An Inquiry Into the Freedom of the Press," by Harold L. Ickes (Harcourt, Brace; Paper edition, 75c)

9 PREMIUM POINTS

"America's House of Lords" (Board edition, \$1.50)

CU's new gold-stamped binder or one of the following CU books:

"False Security," by Bernard J. Reis

"Our Common Ailment" or "Good Health and Bad Medicine" (not yet published), by Harold Aaron, M.D.

"Millions on Wheels," by D. H. Palmer and Laurence Crooks

12 PREMIUM POINTS

One bound volume (1936-37, 1938 or 1939—completely indexed) of CU Reports, or one of the following books:

"The Grapes of Wrath," by John Steinbeck (Viking; \$2.75)

"Factories in the Field," by Carey McWilliams (Little, Brown; \$2.50)

"The Pressure Boys," by Kenneth G. Crawford (Julian Messner; \$3)

"Lords of the Press," by George Seldes (Julian Messner; \$3)

15 PREMIUM POINTS

"A. T. & T.," by N. R. Danielian (Vanguard; \$3.75)

"Does Distribution Cost Too Much?" by the Twentieth Century Fund (\$3.50).

21 PREMIUM POINTS

Two bound volumes of CU Reports, or

Any two books from the 12 point list (Books from the 15 point list may be included for 3 additional points)

30 PREMIUM POINTS

All three bound volumes of CU Reports, or

Any three books from the 12 point list (Books from the 15 point list may be included for 3 additional points)

RATES & SCORING

Premiums will be awarded on the basis of a point score, as follows:

1 \$3 membership (\$3.50 Western) 3 points

2 \$2.50 Gift Memberships (\$3 Western)—This rate applies only when 3 or more memberships are entered at one time. Each 3 points

3 \$5 two-year membership (\$6 Western) 6 points

4 \$5 Special Offer (\$6 Western)—A year's membership plus an indexed bound volume of all 1939 issues 6 points

5 \$7 three-year membership (\$8.50 Western) 9 points

Conditions

THE Premium Offer is available to all present members and all who join before January 25, 1940. Memberships entered for premiums must be received at CU's offices before January 25, 1940, and must be accompanied by the full amount of money due. (Renewals will be counted.)

CU Publications of Special Interest

"Our Common Ailment"

"Our Common Ailment," by Dr. Harold Aaron, CU's special consultant on medicine, provides an intelligent approach to the treatment of constipation. "A swell little book."—*Paul De Kruif*. (Bookstore price, \$1.50; CU edition, \$1, postpaid.)

"Good Health and Bad Medicine"

Dr. Aaron's new book will analyze many of the problems—such as colds, insomnia, the safeguarding of the teeth and gums—that face the layman in his daily health routine. (Bookstore price, \$3; CU edition, \$1.50, postpaid.)

"Millions on Wheels"

Written to provide standards for selecting a new or used car and for operating it safely and economically, this book will en-

able a car owner or prospective car owner to make real savings. A supplement gives ratings, by brand names, of autos, tires, gasolines, batteries, &c, based on CU tests. (Bookstore price, \$2.50; CU edition, \$1.25, postpaid.)

"False Security"

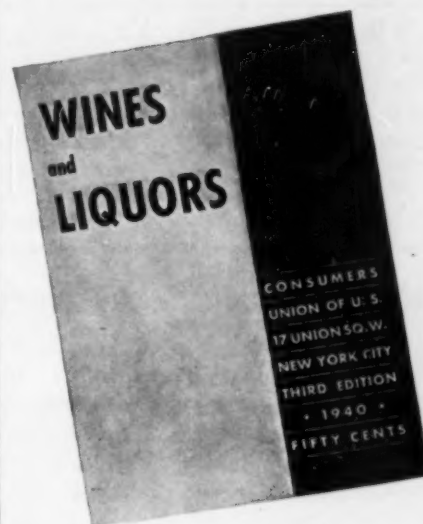
"Investors, both actual and prospective, will find Mr. Reis' competent and sincere work extremely valuable for the information and guidance it contains."—*The New York Times*. (Bookstore price, \$2.75; CU edition, \$1.40, postpaid.)

CU's Bound Volumes

Each of the three volumes is bound in hard board covered with colored cloth, and stamped in white. Each contains a new and complete printed index of the contents. Prices: 1936-37 volume, \$2.50; 1938 volume, \$2.50; 1939 volume, \$3.

For ordering, use coupons on pages 29 and 30

JUST PUBLISHED!



EXTENSIVELY REVISED, ENLARGED AND IMPROVED

The 1940 edition is extensively revised and handsomely printed from new type. Comments and ratings are based on laboratory and taste tests made by liquor experts under CU's supervision.

Many additional widely sold brands were tested and are rated for the first time.

A new appendix on mixing drinks and a handy reference listing of the chateaux and estates in the wine-growing districts of France are included.

The 1940 edition is 158 pages—32 pages larger than the 1939 edition. And an improved index makes the book far more useful for quick and accurate reference.

Wines & Liquors

should be a "must" item in the budget of every liquor consumer. Use the coupon on page 30 to order your copy today. (Note: *Wines & Liquors* is not knowingly sold to minors)

Price 50c Postpaid

Consumers Union of United States, Inc.

"The purposes for which it is to be formed are . . . to obtain and provide for consumers information and counsel on consumer goods and services . . . to give information and assistance on all matters relating to the expenditure of earnings and the family income . . . to initiate, to cooperate with, and to aid individual and group efforts . . . seeking to create and maintain decent living standards for consumers."—from Consumers Union's Charter.

Attack from the Die-Hards

ON PAGES 24 and 25 you will find a piece dealing with the attack leveled against CU and other consumer organizations last month by J. B. Matthews, research director for the Dies Committee. The conclusion is inescapable, we think, that Mr. Matthews' handiwork—for all that it was a crude and bungling job—was part and parcel of a strongly backed campaign to discredit individuals and organizations most active in the fight for honest dealings in the distribution of goods.

It is not surprising that newspapermen, probing into the whys and wherefores of a "report" so malicious and so mysteriously put upon the record, should discover the National Ass'n of Manufacturers and proprietary drug interests lurking in the background; these die-hard segments of business have fathered many an onslaught on consumer activity, and this newest one is very much as predicted on this page in months past.

We do find it surprising and regrettable that Mr. F. J. Schlink, president of Consumers Research and pioneer of consumer testing in the United States, should have involved himself in an undertaking of this sort. Mr. Matthews, until recently an official of Consumers Research under Mr. Schlink, succeeded in maneuvering him into an anti-labor stand four years ago. It now seems that Mr. Schlink has been led into an anti-consumer stand as well.

The legal counsel of Consumers Union and, so we understand, of several other organizations and individuals victimized by Mr. Matthews' "report" are at present going over it with an eye to possible action. But action beyond that is needed, too. There can be little doubt that a congressional investigation is called for; of the Dies Committee, to find out if (as seems likely) it has perverted its functions; and of Mr. Matthews, to sever him from the public payroll if the disclosures warrant that action.

We urge strongly that CU members write to their Congressmen immediately, and get their friends to write, demanding such an investigation.

What effect the Matthews attack will have on Consumers Union, the principal target, remains to be seen. CU members, familiar with the organization's work and aware of the powerful forces seeking to undermine it, are not, of course, impressed by such slanders. Others may be—since the press which refuses CU the right to buy advertising space to tell its story to the public has seen fit to frontpage Mr. Matthews' story from coast to coast.

Caught in this fancy squeeze play, CU can only turn to its members. You must tell your friends the real meaning of the Matthews attack. You must do your best to help CU grow by bringing in new members. It is too bad that CU cannot do its work, and CU members cannot get the fruits of it, in peace. But Mr. Matthews and his like would have it otherwise; and the challenge must be met.

Cooperation from the Scientists

CU is happy to announce that a working relationship has been established with the Boston-Cambridge Branch of the American Association of Scientific Workers, an organization of persons occupied in the pure and applied sciences. Through a Consumer Committee the members of the Branch will help CU's technicians in setting up standards and methods of test, and will advise on the conduct of tests and in the interpretation of findings.

The Boston-Cambridge Branch, including about 140 scientists and engineers from such universities as Harvard and the Massachusetts Institute of Technology, as well as independent scientific workers in the Boston area, some time ago investigated the consumer problem. As a result of that investigation, the Branch resolved to support the consumer movement. "It is generally recognized," said their report, "as providing millions of consumers with a more intelligent and critical attitude in their purchasing. The Committee believes that the consumer movement in this respect provides a means for enabling consumers to increase the effective purchasing power of their incomes." The Consumer Committee was therefore established to work with consumer groups, and definite plans have now been made for active cooperation with CU.

The American Association of Scientific Workers was organized in Philadelphia in 1938 and is sponsored by such outstanding scientists and educators as Nobel Laureates Dr. Arthur H. Compton and Dr. Harold C. Urey, Dr. Franz Boas of Columbia, Dr. Harlow Shapley of Harvard, Dr. Henry E. Sigerist of Johns Hopkins and Dr. Walter Rautenstrauch of Columbia. Membership in the A.A.S.W. is open to all persons who are occupied in any branch of pure or applied science and who possess at least a bachelor's degree or equivalent qualifications.

In its program the A.A.S.W. points out that "the results of scientific achievement are too often misapplied and contribute rather to man's woe than to his weal. . . . The scientist's obligation to mankind extends beyond the ivory tower of the laboratory into all his relationships with society, for almost every aspect of modern life is influenced or controlled by applied science."

The national organization states as its aims: to promote the wider application of science and the scientific method; to combat all tendencies to limit scientific investigation or suppress conclusions drawn from it and particularly to oppose the suppression of technical advance by shelving of scientific discoveries; to develop in the minds of the general public a better understanding on scientific matters; to expose pseudo-scientific claims and theories; to secure adequate financial support for scientific research; to return to scientists more of the fruits of their research for the further development of science; to safeguard the professional interests of scientific workers; and to extend the scholarship and fellowship system.

To accomplish these objectives, the Association has built up a national organization and active local groups, which hold public meetings where matters of individual and social interest to scientists are discussed.

CU feels that its members will welcome the development of the plan for active cooperation with the Boston-Cambridge Branch of the A.A.S.W. It is hoped that in the near future similar relationships may be established with other branches. *Note: As we go to press, word comes of a similar arrangement with the New York Branch.*